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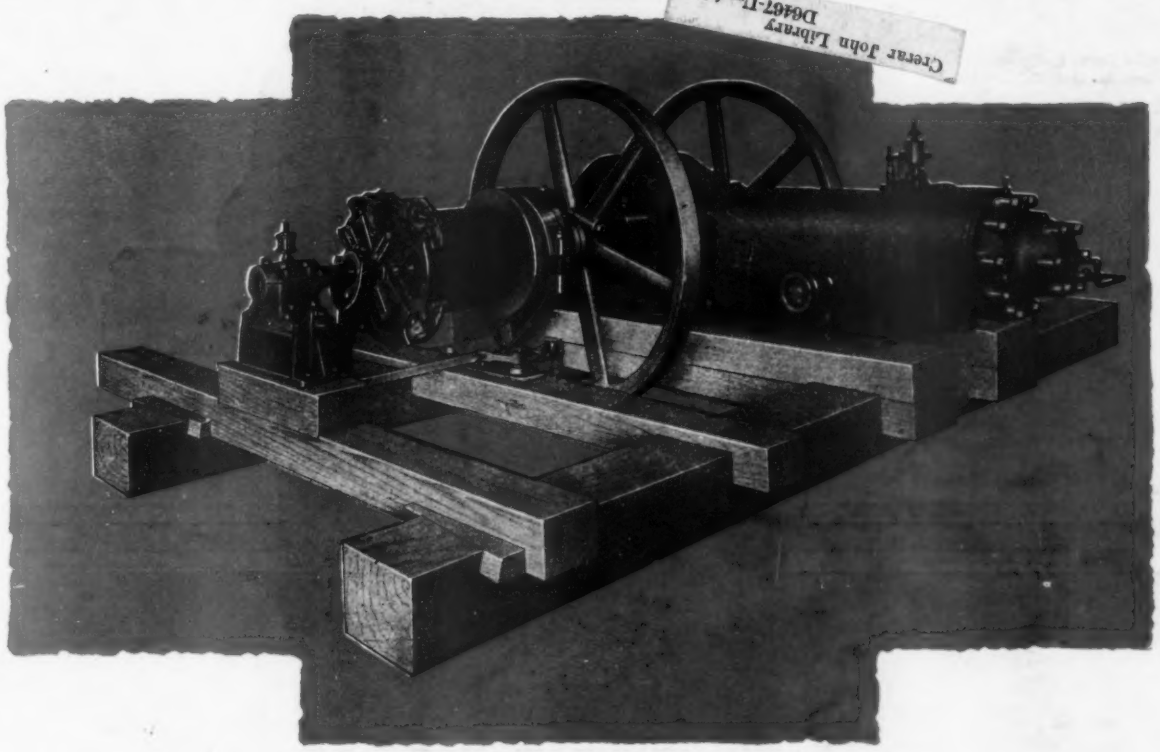

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The Oil and Gas Journal

PRODUCING REFINING MARKETING

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Crude Situation Shows Improvement

Highest daily average estimated production week ended May 30, 1925, 2,347,984 bbls. Lowest in 1925, January 3, 1,911,730 bbls.

Nigger Creek Area Removed As Menace. Seminole Pool in Oklahoma Regarded As Most Important Section Now

By Andrew M. Rowley

Highest daily average estimated light oil production in 1925, week ended January 17, 1,525,220 bbls. Lowest in 1925, July 18, 1,374,173 bbls.

Despite another big gain in average daily production of crude oil in the United States last week, the general crude petroleum situation really appears brighter now than it did a week ago. This is due to several developments, chiefly the apparent failure of the Pure Oil Company's test in the Nigger Creek area, near Mexia, Tex., which seems to make the productive area there even smaller than had been expected; the congestion in the Panhandle area of Texas together with regulations forbidding the completion of wells until storage facilities are available; and the showing of large quantities of salt water in the Spindletop Pool in the Gulf Coast. While some operators believe Spindletop will attain a peak of 100,000 barrels daily, it is felt the decline there will be very rapid. And with the first touch of cold weather, it is believed the production of the Texas Panhandle will experience a severe slump owing to the viscosity of that crude.

Production of the Texas Panhandle is not exerting much influence upon the crude oil market because of the type of the crude and because of lack of facilities to move it. Big production at Nigger Creek would have had an immediate effect as that crude is of high quality and pipelines are available, consequently, the removal of that area, for the time being at least, as a menace is a relief to operators in other fields. The intrusion of water at Spindletop is an important factor, indicating, it is said, a quick decline for the field.

The recently opened Seminole Pool in Oklahoma is the big factor now looming on the horizon and that field probably will produce a large quantity of high gravity crude. Operators in close touch with that area believe a peak of from 60,000 to 75,000 barrels a day may be reached by November 1 of this year. Such a production of that quality of crude will be an important influence upon the general situation but, as stated above, Spindletop probably will be on the decline then and the Panhandle may be expected to show a material slump as soon as cold weather sets in.

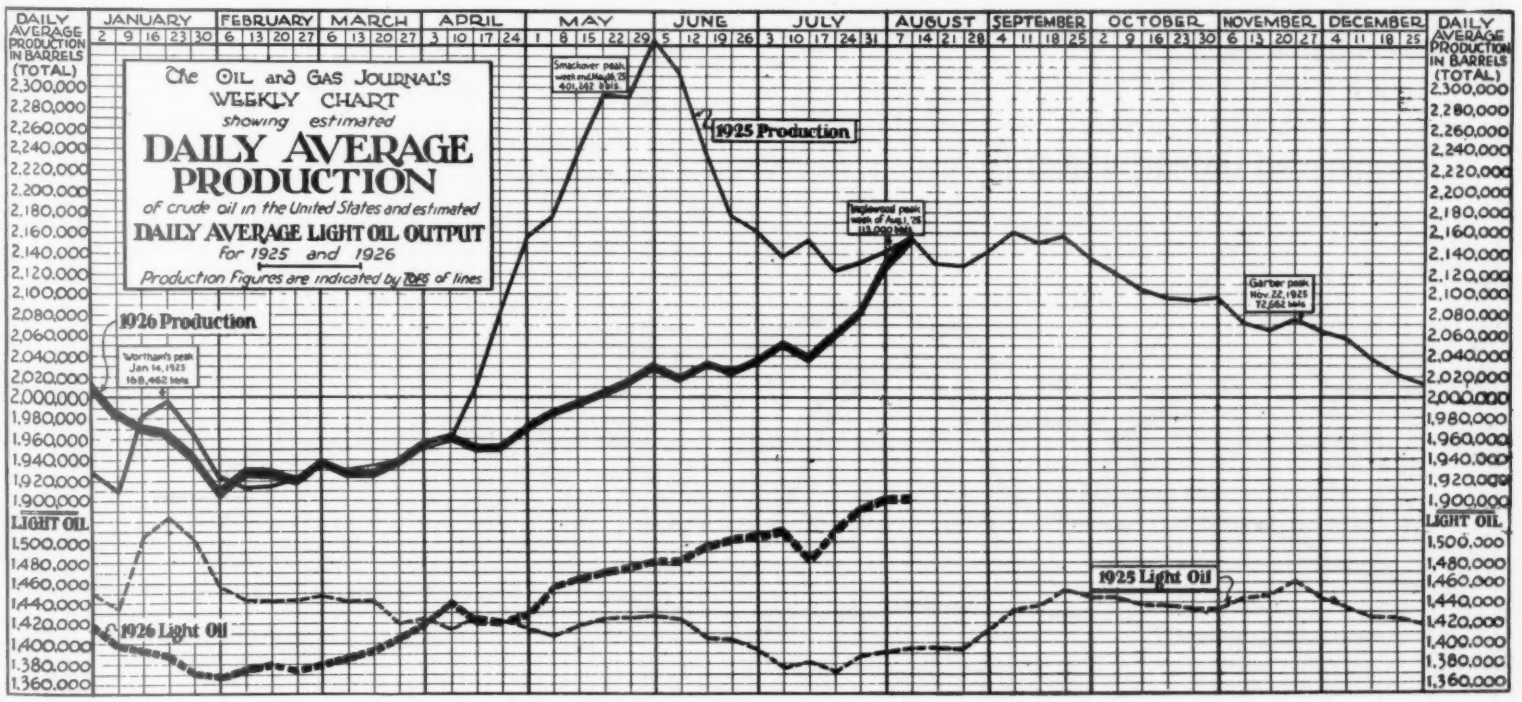
Spindletop last week averaged 78,500 barrels a day and the Texas Panhandle 88,025 barrels daily. The former probably will not maintain that output very long and the latter production is not readily available to markets, hence the production situation at this time contains little to worry about.

PRODUCTION IN THE UNITED STATES

Estimated daily average production of light and heavy gravity crude oil in the United States for week ended August 7, and a comparison with the previous week follows:

	Aug. 7		July 31	
	Light	Heavy	Light	Heavy
Oklahoma—				
Tonkawa	38,210	.....	39,155	.....
Burbank	47,340	.....	44,870	.....
Other Osage Fields	34,235	.....	34,310	.....
Cushing and Shamrock	21,695	.....	21,545	.....
Bristow and Eastern Bristow	28,260	.....	28,635	.....
Cromwell	16,395	.....	16,505	.....
Garber	34,505	.....	35,580	.....
Blackwell-Braman	17,265	.....	17,525	.....
Seminole	10,815	.....	11,600	.....
Wewoka	31,385	.....	29,885	.....
Northern Miscellaneous	114,255	.....	115,625	.....
Southern Fields	65,125	.....	65,750	.....
Total Oklahoma	459,485	.....	460,985	.....
North Louisiana	43,180	13,260	43,300	12,840
Arkansas—				
Smackover Light	15,455	.....	15,180	.....
Smackover Heavy	.....	122,995	.....	123,185
Miscellaneous	21,690	.....	21,740	.....
Total Arkansas	37,145	122,995	36,920	123,185
North Central Texas	179,826	.....	177,186	.....
Texas Panhandle	88,025	.....	80,748	.....
Powell	28,623	.....	28,800	.....
Mexia, Currie, Richland, etc.	16,826	.....	17,620	.....
Wortham	7,175	.....	7,300	.....
Kansas	110,390	.....	111,765	.....
Total Mid-Continent Area	970,675	136,255	964,624	136,025
Gulf Coast	.....	173,745	.....	150,775
Southwest Texas	.....	45,930	.....	44,505
Eastern	104,750	.....	105,100	.....
Rocky Mountain Area	110,663	.....	114,075	.....
California—				
Santa Fe Springs	49,500	.....	49,500	.....
Long Beach	108,000	.....	108,500	.....
Huntington Beach	44,500	.....	44,000	.....
Torrance	6,000	23,000	6,000	23,000
Dominguez	20,500	.....	20,500	.....
Rosecrans	16,000	.....	16,000	.....
Inglewood	27,000	20,000	28,000	20,000
Ventura Avenue	45,000	.....	46,000	.....
Remainder of State	43,000	214,000	43,000	212,000
Total California	359,500	257,000	361,500	255,000
Total United States	1,545,588	612,930	1,545,299	586,305
Grand Total		2,158,518		2,131,604

Total Increase, 26,914 Bbls.; Light Oil Increase, 289 Bbls.



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Other Products in Oklahoma Generally Firm. Government Report Reflects Mid-Continent Marketing Situation

By C. O. Willson

Fractional reductions in gasolines with a steady market in practically all other products summarizes the week's developments in the Oklahoma (Group 3) market during the past week. Efforts to bolster the gasoline market the middle of last week proved unsuccessful and refiners in a majority of cases if they sought either a spot movement or sales over the remainder of the month were forced to give slight concessions.

This situation did not apply to natural gasolines. The demand for all grades of this product improved the latter part of last week. The first of this week the A grades had advanced to 8¾ cents with 8⅛ cents low on Grade C. The B grades were firm. The manufacturers expect to be able to maintain these prices over the month with predictions heard that additional advances will materialize before September.

Some new business aided the kerosene market on Friday and Saturday and after giving indications of a slump earlier in the week, prices were firm the fore part of this week. Fuels, including distillates and gas oil, continue strong with more buyers than sellers so far as Oklahoma is concerned. All manufacturers of lubricating oils report a steady movement. Wax is inactive.

Regarding gasoline the same situation obtains as has been explained in these columns in previous issues. So far as the smaller refiners are concerned gasoline stocks are low. As shown in the accompanying table, however, there is the usual amount of gasoline on hand when the entire Mid-Continent is considered.

REFINED MARKET BAROMETER

Refined markets throughout the United States during the past week were generally strong. The only exception to the general situation was in the Mid-Continent area and other interior refinery centers where gasolines were hardly holding their own. In the coastal areas the gasoline market was strong with a ½ cent advance in most of the domestic grades. Reports from all parts of the country including California show that the domestic consumption of gasoline during the past week was probably greater than any time this year. Kerosene advanced in export and domestic movement in the East. Fuel oils including distillates and gas oils were strong in all areas. Lubricating oils were firm. Wax slow.

Mid-Continent—Satisfactory movement of all products with the exception of gasolines which are slightly lower in price at most plants. Natural gasoline better resulting in higher prices on all grades. Fuel oil, distillates and gas oils firm. Kerosene market stronger first of week. Other products unchanged.

Atlantic Seaboard—Market on all products continues to show strength. Domestic gasoline prices and kerosene for export and domestic movement also advanced during week. Record gasoline consumption reported. Other products unchanged.

Pennsylvania—Kerosene prices higher with better movement of gasoline. Good demand for most grades of lubricating oils. Fuel oil active.

California—Record consumption of gasoline reflected in firm refinery market. No change in other products.

Gulf Coast—Gas and fuel oil active. Some buying of zero cold test oils for coming winter.

Chicago—Kerosene market firm after slump. Refiners having difficulty maintaining gasoline prices. Other products firm.

As shown in the Bureau of Mines report covering the entire United States on page 100 of this issue many areas outside the Mid-Continent have considerable more storage than last year at this time.

Refiners in these adjoining areas believe they are entitled to prices from ½ to ¾ cents higher than those now prevailing. But attempts to advance even ¼ cent have failed so far. Other refiners located in the Middle West and eastern areas, including some of the major organizations, are apparently willing to take business at present prices and are quick to take advantage of a change in prices.

Mid-Continent Situation

This narrowing of the Mid-Continent market is reflected in the accompanying table which summarizes the latest available data from the Bureau of Mines covering Mid-Continent refinery operations. The table was prepared to show at a glance the exact statistical situation for the refineries operating in the Mid-Continent Field.

The table shows that refiners in that area which includes Oklahoma, Kansas, North Central Texas, Arkansas and North Louisiana in June ran 27,000 bbls. daily less crude to stills than in June of last year. This has been the trend in operations for several months.

Due to the increase in gasoline recovery the gasoline production for June was approximately only 6,000,000 gallons less than in June of last year. This means,

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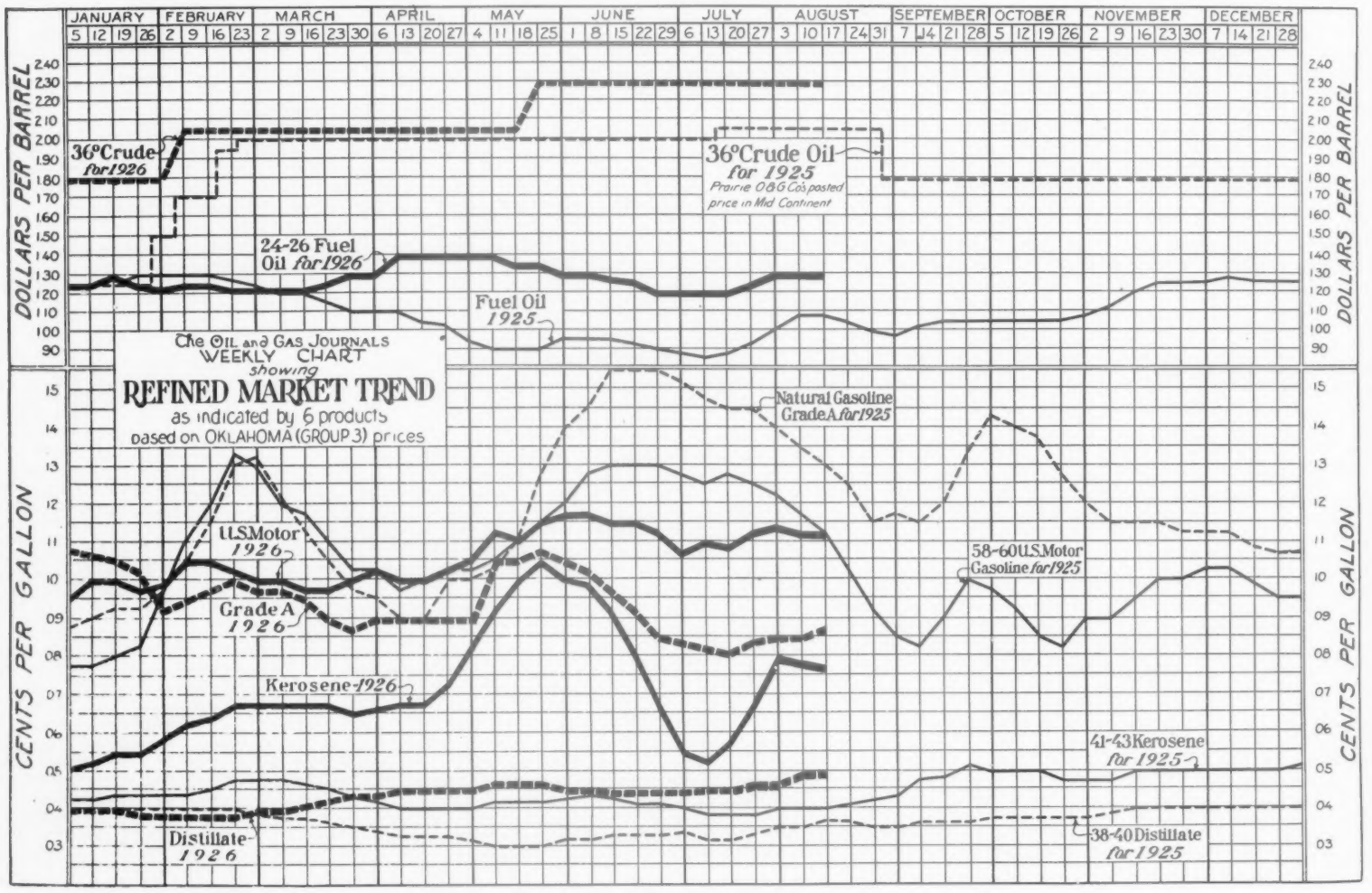
*SUMMARY OF MID-CONTINENT STATISTICAL SITUATION. BASED ON BUREAU OF MINES REPORTS

	Daily Crude Runs to Stills Bbls.	Gasoline Produced	Gasoline Stocks Last Day of Mo.	Kerosene Produced	Kerosene Stocks Last Day of Mo.	Gas and Fuel Produced	Gas and Fuel Oil Stocks Last Day of Mo.
June, 1926	423,990	238,172,000	170,934,000	41,433,000	33,048,000	222,345,000	243,987,000
May, 1926	427,320	246,930,000	180,262,000	51,007,000	25,472,000	224,376,000	226,599,000
June, 1925	450,916	244,126,840	180,227,958	43,852,051	51,796,393	259,340,007	256,722,554

*All data given in gallons for entire month, except crude runs to stills.



Industry Needs Fair Price, Maintained

Co-Operation Among Producing, Refining and Marketing Branches Urged. Petroleum Uses to Expand

By Phillip Kates*

In 1906 the lumber industry estimated that within 20 years from that time, the entire possible cut of yellow pine in the south would be exhausted. And that estimate was based upon an expansion of the building program only at a normal rate; normal, that is, according to 1906 requirements. Yellow pine in June, 1926, stood at $30.59 per 1,000, as against $17.24 in June, 1906. (The price quoted is furnished by the Southern Pine Association, f.o.b. mill, New Orleans.) The price is relatively high; but in spite of a building program throughout the United States which was undreamed of in 1906, the 20 years have passed and we are not yet in a period of famine. And the lumber business seems as stable as it was then.

Estimates have been made that the not far distant future will see a depletion of the oil supplies of the country, and those estimates are based, largely, on a normal increase in demand, in the light of present uses. To visualize an expanded demand, based on new uses, such as the utilization of an individual power and refrigeration plant for farms, using a small oil burning engine instead of electricity; moderate priced heating and refrigeration units in small towns, where gas and electricity costs are high; the development of the airplane, the extended use of fuel oil in industry; if these are considered the question of the future supply of oil may appear as desperate as the lumber situation would have appeared to a lumberman who in 1906 had foreseen the building program of the past 10 years.

Greater Use of Petroleum

It appeared then as though the lumber industry was doomed through a failure of an adequate supply of its basic material; and relief was expected through the complete substitution of other materials. Poured concrete houses were to come; the use of concrete and metal lumber. But matters did not work out in just that way. We have seen the increasing use of concrete in large buildings; the use of steel lumber in buildings of masonry construction; the use of composition board, and sheets made from wood pulp, the refuse of lumber mills; the use of board made from farm refuse, corn stalks and sugar cane. But still the demand for lumber has expanded and has been met.

We hear of the saturation point of the automobile industry, as though that would mark the peak of demand for oil products; but the future of the oil industry includes not merely a normal demand based on present uses, but a widely expanded demand based on new uses to be developed. When the saturation point of the automobile industry shall have been passed; when the annual output of motor cars merely represents replacements, and new sales in proportion to increase of population, the expansion will still go on creating new demands and furnishing new uses..

As the development of lumber substitutes did not destroy the lumber business, but steadied it by making possible the carrying out of the present building program, so the development of refining processes, and even the perfection of auxiliary substitutes will steady the oil industry, by enabling it to meet with confidence the expanding uses of the internal combustion engine. For, in spite of theoretical calculations, there is no imminent prospect of a revolution in engine fuel. The oil industry need not fear either to co-operate in working out new demands and expanding uses for oil; nor to aid in perfecting auxiliary substitutes for oil.

Expanding Uses, Steady Business

But the basis for an expanding program must necessarily be a price that can compete with the substitutes. For yellow pine at $100 a thousand could not compete either with steel or concrete; nor can gasoline at $1 a gallon compete with a substitute, even though that should entail expensive changes in carburetion or engine construction.

But if the future stability of the industry demands a reasonable price, it also demands a constant price that shall be adequate to the continued operation of the producing wells, the refineries and the pipelines. And it cannot be subject to wide seasonal fluctuations, nor to price changes based on temporary overproduction of crude. It is possible that the new high level of demand and the failure to open any such number of new major pools as occurred in 1923, may eliminate the possibility of demoralization due to a temporary flood of crude; although that is always possible, in the present state of the producing end of the business. Production is now hard to control. Every producer will view without dismay a flood of oil if it comes from his wells. But the situation in the Panhandle this summer shows that the producers have traveled a long way since the days of Cushing in their program for drilling and the location of their wells; and the action of the Railroad Commission of Texas in threatening a fine against any producer who drills in a well without adequate steel tankage marks a firmer attitude against waste than the hesitant action of the Corporation Commission of Oklahoma in 1911 in appointing an unofficial umpire to apportion runs in the Cushing Field.

The consolidation of a producing and a refining unit into one holding company is bringing these two branches together. The fact may be deplored, but neither the independent producer, nor the independent refiner can survive if his business is based on wasteful methods. For the police power of the state can be successfully put in action against waste, but not to compel waste. And competition which involves waste is unsound and eventually ceases.

Industry Must Avoid Waste

The attitude of marketers to view the accumulation of vast stores of gasoline at the refineries, as beneficial to them by forcing the price down to a point that enables the filling stations to sell at a comparatively cheap price, cannot have a good effect on the industry as a whole, nor even on the marketing branch itself. Unhealthy reserves at the refineries can be caused by hand to mouth buying plans; but these cause shut downs and the backing up of crude in storage; and then a demand which is abnormal because of short refined supply, and prices of the finished product rise. The public does not welcome fluctuating prices. A lower price caused by the accumulation of stocks, being temporary, causes dissatisfaction when a raise comes. And the old explanation of some filling station man, that Rockefeller needs a few more millions, and so adds a few cents to the gallon of gasoline, only adds to the indignation of the public.

With the seasonal changes in demand lessening, through the operation of cars in winter, and the increase in public automobile transportation, both for passengers and freight, the co-operation of the marketers in their buying programs might aid in stability. The idea that marketing is entirely independent of refining may easily result in the destruction of that branch of the industry, by its absorption by the refiners themselves; a tendency which is now clearly pronounced.

There has been an effort on the part of the crude oil purchasing companies to sustain prices during periods of overproduction, though they have not always been successful. And there are two motives at work. The assets of the purchasing companies are crude and tankage. It is to the interest of this branch to sustain prices to protect their balance sheets. But as they must buy for cash the oil offered by the producers, when the flood becomes too great, neither their available capital nor their storage is equal to the task. So, prices are reduced, not for the purpose of securing oil at a less cost, but to discourage new production.

Maintaining Crude Prices

This policy of the purchasing companies has been violently attacked, and there is a perennial attempt to show that it is the result of a price fixing agreement between the larger companies to maintain prices in defiance of the laws of supply and demand, and so illegal. There is probably no more thankless job than an attempt to justify the maintenance of prices of a widely used commodity, either in theory or in practice. But a fair price uniformly maintained may be a safeguard, not only to an industry, but to national prosperity, and a low price may be a very serious danger.

The country has come to realize that a ruinous price for farm products though it may temporarily bring low living costs, in the end may spell disaster. And the whole thought of the Government is bent to the stabilizing of agriculture.

Almost any one who takes a large view will admit that the petroleum industry is a great factor in the national safety and prosperity. It is what is now called a "key" industry. And it is not too much to say that of the key industries, agriculture and oil, may well stand side by side. Without oil not a wheel can turn, and without gasoline, the internal combustion engine, while it might be in use, would offer neither its present uses, nor its future possibilities.

Petroleum Is "Key" Industry

The hope of the oil industry, for such co-ordination of the producing, refining and marketing branches, as will enable it to stabilize itself; to work out a program of expansion, not on speculation but on a steady and sound basis, while it may easily enough be shown to arise primarily from the desire to protect its capital and its profits, need not for that reason be condemned nor ridiculed. The farmer may think only of the interest on his mortgage; the payments for his tractor and his car; and the oil corporation may think only of its balance sheet. But in either case, a period of profits brings forgetfulness of lean years. It is axiomatic that a good wheat crop will turn the March Democrat into the November Republican; which is another way of saying that a full meal will take our minds off the hard work of solving a difficult problem. But what is needed is the assurance of a steady supply of full meals; that is the difference between prosperity and the bread line.

Just now a good crop is making the farmer forget his frenzied fear of last spring; and the balance sheets of the oil corporations are making them forget the deficits of prior years. The attacks on the Steel Corporation diminished with its program of complete publicity. But if the prices of steel were high because of wasteful methods. or simulated competition, it would be the subject of attack at every session of Congress. Confidence in the oil industry will not come until it gathers itself together to consider its problems as a unit; not as three unrelated competing units each striving for its immediate prosperity at the expense of the others.

The producing problem is being worked out. The refining industry is adjusting itself. The marketing branch has grown up almost over night. Retail distribution seems to be a field to itself. But whether marketing will remain in many individual hands, or pass to the refiners only the future can disclose, but the problem should receive united study. If the producing and refining business has learned from its business troubles to provide against the future, that experience might be of benefit in the situation that is confronting us.

Growth of Retail Distribution

The filling station or jobbing rack may not be impressive. But though it may cost but a few hundred dollars it stands for the marketing branch of the industry. The elimination of waste and senseless competition is as necessary there as the prevention of a line fight or a duplication of pipeline facilities.

The action of the Government in appointing an Oil Conservation Board gives hope that co-operation on the part of the Government may be available

(Continued on Page 129)

*Second of a series of articles by a Tulsa attorney who has made a study of the petroleum industry.

No Change in Total Refinery Runs

Throughput in Mid-Continent August 1 Practically Same As Last Month. Important Additions Cracking Facilities

By C. O. Willson

Crude runs to stills of Mid-Continent refineries (Oklahoma, Kansas, north central Texas, north Louisiana and Arkansas) during August will be practically the same as during July, based on the monthly survey of all operating plants as of the first of the month.

The August 1 report shows that there were minor changes in the crude throughput of several refineries, but the reductions are largely offset by the increases, so that for the entire area the crude runs to stills on August 1 totaled 407,475 bbls., a decrease of only 2,595 bbls. from the daily average on July 1. The crude runs to stills on the latter date were only 5,380 bbls. daily less than on June 1, so that it now appears that the operations of the Mid-Continent plants considered as a unit will show little change from June 1 to September 1.

With August the maximum gasoline consuming period of the year under ordinary conditions it would have been reasonable to expect an increase in crude runs to stills for the next 30 days at least. The fact that operations were slightly curtailed can be explained as a development of the present market situation in both crudes and refined products. Mid Continent refiners have had difficulty for several weeks in maintaining a gasoline market which permitted profitable operation due to the keen competition of adjoining areas. This has served as a check on any general expansion in plant operations.

In this connection it is interesting to note that despite the large increase in gasoline consumption for the country as a whole Mid-Continent refiners on August 1 were actually running 19,807 bbls. less to their stills than on August 1 of last year. This is further proof of the fact which has been demonstrated before that the outlet for Mid-Continent refined products has not increased in line with the total increase in demand.

In this connection, however, it should be borne in mind that while the crude runs to stills are less, the actual gasoline production this year is more than last. This is due to more efficient operation of which additional cracking facilities are the most important feature.

Cracking Facilities Expanding

There has been a steady increase in cracking facilities in the Mid-Continent Field for the past year, especially during the past three or four months, a period in which several units have started operating. During the past month there has been some notable increases to the cracking capacity of that area. At Ponca City, Okla., the Marland Refining Co. has started operating Cross and Dubbs units with a combined capacity of 10,000 bbls. daily. At Muskogee, Okla., the Pure Oil Co. has started operating two 2,000-bbl. Cross units. At Shreveport, La., the Louisiana Oil Corp. now has two additional units of the Tube and Tank process in operation. Several units have been placed in operation at other plants.

It will be noted in the accompanying detailed tables giving the crude runs to stills of each plant that several companies with shut-down plants have been dropped from the list. Only plants which have been in operation some time during the previous year are carried in the list. The companies whose plants have been dropped are as follows: Oklahoma Texas

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MID-CONTINENT REFINERY OPERATIONS
Table No. 1
(Based on plants August 1, 1926, and July 1, 1926)

	*No. Plants Aug. 1	Crude Capacity Bbls.	Cracking Capacity Bbls.	Plants Oper'g Aug. 1	Crude Runs July 1 Bbls.	Plants Oper'g July 1	Crude Runs July 1 Bbls.	Daily Decrease Aug. 1 Bbls.
Oklahoma	52	258,300	93,550	49	174,450	49	173,070	‡1,380
N. Cent. Texas	38	163,750	49,450	30	84,025	30	84,525	500
†Kansas	21	126,000	56,600	18	91,700	17	94,000	2,300
N. Louisiana	6	42,000	7,500	5	36,000	6	37,800	1,800
Arkansas	9	29,000	12,600	9	21,300	9	20,675	‡625
Total	126	619,050	222,700	111	407,475	111	410,070	2,595

*Does not include plants which have been shut down one year or longer.
†Includes one Missouri plant.
‡Increase.

Table No. 2
(Based on plants August 1, 1926, and July 1, 1925)

	*No. Plants Aug. 1, 1925	Crude Capacity (Bbls.)	Plants Oper'g Aug. 1, 1925	Crude Runs Aug. 1, 1925	Daily Decrease Aug. 1, 1926
Oklahoma	61	277,400	53	190,250	15,800
North Central Texas	47	170,050	37	91,152	7,127
†Kansas	26	125,900	21	94,500	2,800
North Louisiana	7	39,300	6	34,900	‡1,100
Arkansas	14	35,700	9	16,380	‡4,920
Total	155	648,350	126	427,382	19,807

*Does not include plants which have been shut down one year or longer.
†Includes three Missouri plants.
‡Increase.

REFINING OPERATIONS IN OKLAHOMA
(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs August 1	Runs July 1
Anderson-Pritchard, Cyril	1,500	1,500	1,000
Barnsdall Refineries, Inc., Barnsdall	5,000	4,000	3,500
Barnsdall Refineries, Inc., Okmulgee	6,000	4,000	Rerun
Bell Oil & Gas Co., Grandfield	3,000	1,500	1,500
Bolene Refining Co., Enid	5,000	4,200	3,600
Cameron Refining Co., Ardmore	3,900	3,000	3,000
Canfield Refining Co., Yale	500	100	150
Champlin Refining Co., Enid	16,000	12,000	8,000
Continental Oil Co., Sapulpa	7,000	2,400	1,500
Cushing Refining & Gasoline Co., Blackwell	1,500	1,200	1,200
Cushing Refining & Gasoline Co., Cushing	2,500	700	1,000
Empire Refineries, Inc., Cushing	7,000	5,000	5,000
Empire Refineries, Inc., Okmulgee	3,000	3,000	3,000
Empire Refineries, Inc., Ponca City	6,500	6,000	6,000
Garber Refining Co. (Omar)	3,000	2,500	2,100
Gilmer Oil Co., Ringling	1,500	1,100	1,100
Globe Oil & Refining Co., Blackwell	5,000	4,500	4,800
Hewitt Refining Co., Hewitt	1,500	Shut down	700
Illinois Oil Co., Cushing	3,000	1,000	1,000
Imperial Refining Co., Ardmore	6,000	3,500	3,550
Independent Oil & Gas Co. (Allied), Okmulgee	4,000	3,000	2,500
Interocean Refining Co. (Lorraine), Bristow	4,000	1,000	1,800
Lawton Refining Co., Lawton	1,000	Shut down	Shut down
Johnson Oil Refining Co., Cleveland	5,000	4,500	4,200
Marland Refining Co., Ponca City	25,000	16,500	20,000
Mecca Refining Co., Allen	1,500	100	100
Mid-Continent Petroleum Co. (Cosden,) West Tulsa	35,000	22,500	25,000
*Miller Brothers 101 Ranch, Marland	100	50	50
†Oil State Refining Co., Enid	2,000	1,000	1,200
Oklahoma Asphalt Co. (Nyanza), Wilson	3,000	800	600
Peppers Gasoline Co., Covington	1,000	800	950
Pierce Oil Corp., Sand Springs	10,000	7,000	7,000
Pontotoc Pipe Line & Refining Co., Allen	800	350	350
Producers Oil Co., Bristow	1,500	800	1,400
Producers & Refiners Corp., West Tulsa	7,000	4,500	4,500
Pure Oil Co., Ardmore	6,500	2,000	2,000
Pure Oil Co., Cushing	5,000	Shut down	Shut down
Pure Oil Co., Muskogee (O. P. & R. Co.)	2,500	3,000	2,000
Riley Petroleum Co., Bristow	800	500	500
Rock Island Refining & Pipe Line Co., Duncan	2,500	2,000	2,270
Sayre Oil & Refining Co., Sayre	500	100	100
Shaffer Oil & Refining Co., Cushing	10,000	9,200	10,000
Sun Oil Co., Yale	3,000	2,800	2,600
Sinclair Refining Co., Muskogee	1,000	1,000	1,000
The Texas Company, West Tulsa	11,000	11,000	11,000
Texas Pacific Coal & Oil Co., Wynnewood	2,500	1,800	1,800
Tidal Refining Co., Drumright	10,000	9,000	9,000
Transcontinental Oil Co., Boynton	2,500	1,400	2,000
Transcontinental Oil Co., Bristow	6,000	4,000	4,000
Tonkawa Petroleum Co., Tonkawa	2,500	1,000	1,000
Western Oil Corp., Beckett	1,500	1,000	1,000
Yale Oil Corp., Yale	1,200	750	450
Total	258,300	174,450	173,070

*Average daily runs lower. †Operated by Bolene Refining Co.

REFINING OPERATIONS IN KANSAS
(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs August 1	Runs July 1
Arkansas City Refining Co., Arkansas City	8,000	2,100	2,100
Barnsdall Refs., Inc. (Waite Phillips), Wichita	5,000	4,000	4,000
Derby Oil & Refining Co., Wichita	5,000	3,500	3,800
El Dorado Refining Co., El Dorado	3,500	2,500	2,500
Golden Rule Refining Co., Wichita	1,000	1,000	900
Grant Oil Co., Augusta	1,500	Shut down	Shut down
Kanotex Refining Co., Arkansas City	9,000	6,500	6,500
Manhattan Oil Co. (K. C. Ref. Co.), Kansas City	5,000	5,000	4,500
Miller Petroleum Co., Humboldt	2,000	1,300	1,200
National Refining Co., Coffeyville	6,000	6,000	6,000
Peerless Oil Refining Co., Chanute	3,000	2,200	2,200
Roxana Petroleum Corp., Arkansas City	19,500	15,000	16,300
Russell County Pipe Line Co. (West Kans. Refg. Co.), Russell	2,500	Shut down	800
Sinclair Refining Co., Coffeyville	6,500	6,500	6,500
Sinclair Refining Co., Argentine	8,000	7,000	5,800
Skelly Oil Co., El Dorado	14,000	11,600	13,000
Standard Oil Co. of Kansas, Neodesha	12,000	8,500	9,000
United Oil & Refining Co., Hutchinson	2,500	Shut down	Shut down
Vickers Petroleum Co., Potwin	3,500	2,500	2,500
White Eagle Oil & Refining Co., Augusta	6,500	5,500	5,500
West Missouri Group—			
Wilhoit Refining Co., Joplin	2,000	1,000	1,000
Total	126,000	91,700	94,000

REFINING OPERATIONS IN NORTH CENTRAL TEXAS
(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs August 1	Runs July 1
Amarillo Refining Co., Amarillo	5,000	3,000	3,000
American Refining Co., Wichita Falls	7,000	4,300	4,500
Buffalo Refining Co., Sherman	500	Shut down	Shut down
Col-Tex Refining Co., Colorado	5,000	4,500	4,500
Crystal Petroleum Co., Burkburnett	1,000	Shut down	250
Dale Oil & Refining Co., Electra	3,000	900	2,000
Falls Refining Co., Wichita Falls	1,500	600	1,000
Gulf Refining Co., Fort Worth	15,000	6,400	6,400
Hagaman Refining Co., Tiffin	2,000	275	275
Humble Oil & Refining Co., Burkburnett	4,000	1,900	1,900
Iowa Park Producing & Refining Co., Iowa Park	2,500	1,200	1,200
Kent-Middleton Refining Co., Angus	3,000	1,600	2,600
Magnolia Petroleum Co., Fort Worth	12,000	6,700	6,700
Magnolia Petroleum Co., Corsicana	10,000	2,700	2,700
Megargel Refining Co., Megargel	2,000	600	600
Miller Petroleum Co., Wichita Falls	3,000	1,400	1,600
Noble Oil & Gas Co., Burkburnett	5,000	3,000	2,600
Olney Oil & Refining Co., Olney	1,200	1,100	1,000
Oriental Refining Co., Dallas	6,000	Shut down	Shut down
Oriental Refining Co. (Trinity), Dallas	5,000	2,800	2,800
*Orient Petroleum Co., Wichita Falls	2,000	1,800	1,000
Panhandle Refining Co., Wichita Falls	4,000	2,700	2,100
Paris Refining Co., Paris	250	250	250
Peerless Refining Co., Wortham	400	Shut down	Shut down
The Petroleum Corp., Electra	2,000	Shut down	Shut down
Primrose Refining Co., Wichita Falls	1,500	Shut down	Shut down
Producers Refining Co., Gainesville	5,000	4,000	4,000
Simms Oil Co. (Clayton), Dallas	4,500	4,100	4,200
Star Refinig & Producing Co., Fort Worth	1,500	Shut down	Shut down
Tidal Western Refining Co., Burkburnett	3,000	2,500	2,700
The Texas Company, Dallas	15,000	9,700	10,000
Texas Pacific Coal & Oil Co., Fort Worth	6,000	2,300	2,300
Texhoma Oil & Refining Co., Wichita Falls	7,000	4,600	4,950
Transcontinental Oil Co., Fort Worth	5,000	1,800	2,200
Waggoner Refining Co., Electra	3,400	2,800	2,700
Western Oil Corp. (Sunshine), Wichita Falls	3,000	1,500	Shut down
White Eagle Oil & Refining Co., Fort Worth	4,000	2,000	2,500
Wilson Brothers Refining Co., Wichita Falls	2,500	Shut down	Shut down
Total	163,750	84,025	84,525

*Operated by Magnolia Petroleum Co.

REFINING OPERATIONS IN NORTH LOUISIANA
(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs August 1	Runs July 1
Crystal Oil Ref. Corp. (Caddo Central), Shreveport	5,000	5,000	5,000
Crystal Oil Ref. Corp. (Caddo Central), Shreveport	3,500	3,500	3,500
Great Southern Refining Co., Ardis	2,000	Shut down	Shut down
Louisiana Oil Refining Corp., Shreveport, Bossier	19,000	17,000	19,000
Shreveport Producing & Refining Co., Shreveport	5,500	4,500	4,300
*The Texas Company, Ardis	7,000	6,000	6,000
Total	42,000	36,000	37,800

*Topping.

REFINING OPERATIONS IN ARKANSAS
(Plants which have been in operation during the past year.)

Name and location—	Daily Capacity	Runs August 1	Runs July 1
Cross Refining Co., Smackover	3,500	3,700	3,250
Home Refining Co., Camden	500	100	100
Home Oil & Refining Co., Hot Springs	500	50	50
Houston Oil Co., Camden	5,000	2,000	1,900
Kettle Creek Refining Co., Pearson	4,000	3,300	3,600
Lion Oil & Refining Co., El Dorado	10,000	7,600	7,800
Newark Refining Co., El Dorado	1,500	1,500	1,100
Ouachita Valley Refining Co., El Dorado	1,500	700	575
Root Refineries, El Dorado	2,500	2,000	2,300
E. M. Tulle, El Dorado	1,000	250	.....
Total	30,000	21,300	20,675

XUM

Oil and Our Future Sources of Energy

Doherty Decries Predictions of Revolutionary Improvements as Preventing Attempts to Secure Oil Conservation

By Henry L. Doherty

There has not been as yet any evidence offered by any one that there are any sources of energy available to mankind other than those which have been known to the scientific world for many decades. Predictions of discoveries about to be made have never been uttered from any source worthy of confidence and if any reasons have been given in justification of these predictions they have not been worthy of a moment's consideration. As yet these predictions have no more claim for credence than if they had all originated with a writer of fiction or a man sick and delirious with fever.

Those charged with knowledge regarding the drafts being made upon the materials upon which we depend for our present sources of energy should avail themselves of every opportunity to inform the public of what is taking place so the public may, if it wishes, take steps to eliminate waste and practice greater economy and especially to draw, so far as possible, upon those materials which are known to be relatively abundant and economize on those materials not known to be abundant.

"Most Wasteful"

Of all the various raw materials used for the production of energy, the production of oil is the most wasteful, therefore I will use oil as best illustrating the possibilities which remain for improvement. It was admitted, even by those who try to minimize the waste that occurs in the production of oil, that in some instances we leave ten barrels in the ground for every barrel that is removed, and it is also admitted by these same people that we sometimes blow to the air and waste more natural gas, when measured from the standpoint of energy, than the energy value of all the oil that we recover. If, however, we assume that we recover and utilize one-sixth of the gas and oil originally contained in our pools our efficiency of recovery is 16 ⅔ per cent. The causes of waste in oil production are known and many of them can be eliminated merely by the adoption of engineering practices which are already known, but this cannot be done now on account of the laws under which we work. After the oil is produced it is largely used for the production of power. While it is possible to get a higher engineering efficiency by the use of a Diesel type engine than by the production of power by the Otto cycle or by steam, nevertheless it has not yet been established that in large scale operations, a higher commercial efficiency can be secured with a Diesel engine than to burn the oil under boilers and use modern high pressure steam turbines. The doubt of our ability to produce oil in sufficient quantities to use for any purpose where coal might be used is alone sufficient to necessitate the use of power apparatus that can easily be converted to the use of coal.

Laws Hinder

While vast steps have been made in many other mining and industrial activities there has been little improvement made in the methods of producing oil because our laws make it impossible to apply scientific methods to oil production, and, in fact, not even the knowledge that would be possessed by an unskilled child can be used. Remarkable progress has, however, been made in the last few years in the science and practice of transforming heat into power. Some of the public utility steam turbine electric generating plants produce in the form of electrical energy 25 per cent of all the energy contained in the raw fuel. The working efficiency of all of the big electric generating stations throughout this country is probably as much as 15 per cent. This will sound ridiculously low to people not familiar with this branch of engineering, but our failure to secure better results in this branch of work is not due to failure to use every known method to secure best results, nor is it due to neglect of research or engineering work either in quantity or quality. Many of the best brains that the world has produced for many decades have been directed towards the effort to secure better results. The average results in a comparable group of electric power plants 25 years ago would not have been as much as 7½ per cent efficiency.

If we now assume this power is generated for the production of light our task is then to transform our electrical energy into radiant energy of the wave lengths within the range of those which the human eye can use. Our most efficient lamps, in commercial use, transform about 10 per cent of the electrical energy into light and the balance is wasted. This will again impress men, skilled in other branches of work, as a remarkably low efficiency and yet here again there has been neither stint of brains or money to secure the best possible results. It is also interesting to note that the efficiency in the production of light by means of the incandescent electric lamp has been increased by approximately seven times in the last 25 years.

Figuring Losses

Taking the losses I have assumed above and restating them, we lose

First, 83⅓ per cent of our energy in the production of oil and gas from our oil pools.

Second, 85 per cent of what remains we lose in the process of transforming heat into electrical energy.

Third, 90 per cent of what remains we lose in transforming the electrical energy into light.

Let us for comparison assume that 25 years ago we lost

First, 87½ per cent of our product in the production of our oil and gas from our oil pools.

Second, 92½ per cent of what remained we lost in the process of transforming heat energy into electrical energy and

Third, 98½ per cent of what remained we lost in the process of transforming electrical energy into light, our combined efficiency 25 years ago was therefore .12½ × .075 × .015 = .000140635, or .0140635 per cent efficiency, or of 100,000 B.t.u.'s continued in the deposit of raw fuel a little more than 14 were realized as light, while today our combined efficiency is

.16⅔ × .15 × .10 = .0025, or 25 per cent efficiency, or of 100,000 B.t.u.'s contained in the desposit of raw fuel about 250 are realized as light, a gain of nearly 18 times, or 1,700 per cent increase in efficiency and yet in this particular series of steps only 250 B.t.u. remain as light of the 100,000 B.t.u. we had in our deposit of raw fuel, or again let us take not working results but the best results possible by our most modern steam plants under test conditions and using 25 per cent efficiency instead of 15 per cent efficiency and we still get only 416 B.t.u. of our energy in the light we produce out of every 100,000 B.t.u. contained in our ground deposit of raw fuel.

In view of the fact that it seems impossible for anyone to give adequate treatment to the subject assigned to me, I have concluded I can make the most important contribution towards getting better results by urging further discussion of this subject at every opportune time and place and that I can best assure that this will be done by pointing out some of the things that should be done and the possibilities of some of the things that might be done, merely as examples to indicate that abundant opportunity still exists for improvement over and above what we are now doing.

Need Statistics on Energy

We need, first of all, reliable statistical facts regarding the rate and purpose for which we now require energy and a prognostication of our future needs arrived at by the best calculations that can be made, based upon all the facts that can now be foreseen. On the other side of the statement, we want statistics showing the magnitude of all of our sources of energy and especially their degree of availability. In addition to the statistics setting forth our needs for energy and our sources of energy, we also need complete statistics on the efficiency we realize in bringing into being our original sources of energy and the efficiency of its transformation into the type of energy we use and the efficiency of application of this energy.

Regarding Oil

When we turn our attention from coal to oil we find a most alarming situation. Each year brings a larger and a larger demand for liquid fuel and yet the science of how to find our remaining pools of oil has progressed at such a rapid rate that we have been producing petroleum at a rate vastly in excess of our real needs and have been burning it to displace coal and in many instances to displace cheap steam coal.

There is no proof and little likelihood we can much longer even maintain our present rate of production.

Pennsylvania was, for several decades, the banner oil producing state and is

(Continued on Page 139)

RENEWS PLEA FOR CONSERVATION

Speaking before the Institute of Politics at Williamstown, Mass., on "Our Future Sources of Energy," on August 4, Henry L. Doherty, president of the Cities Service Co., gave some interesting views as to research tendencies and reiterated statements previously made as to the opposition against "conservation" of petroleum and other energy sources.

"There is no question," he said, "but what the most effective argument now being used against further research work, in many instances, is the argument that there are revolutionary improvements 'just around the corner,' and that all this expenditure in time and money will be for nought. Every attempt to conserve what are now known to be our sources of energy are resisted on the grounds that there is no need to conserve them because science will find a substitute before these resources are exhausted."

Mr. Doherty again pictured the production of petroleum as the most wasteful and declared "there is no proof and little likelihood we can much longer maintain our present rate of production."

He advocated reliable statistics regarding the rate and purpose of energy materials and use, and he emphasized the importance of authentic research.

PANHANDLE PRODUCTION MAY DROP QUICKLY AS RESULT OF CONGESTION

By J. L. Dwyer

Trouble is brewing for the operators in the Texas Panhandle Field, and it is of the variety which is marked with a capital T. The past two weeks have witnessed several incidents which have greatly altered the future of this field.

There are several contributory causes for the uneasiness which is manifested for the future of the field, and possibly the greatest is that the realization of the objectionable qualities of the oil produced there and the havoc which it plays upon refinery equipment. The other causes for alarm are railroad congestion, gathering pipeline congestion, the lack of adequate storage for the crude oil, and the edict of the Texas Railroad Commission (which has jurisdiction over oil production in the state) forbidding operators to drill in or shoot wells unless ample storage is available for the oil. The edict is issued with the penalty of a heavy fine for disobedience.

The thing which has hampered the development of the field is the lack of a Mid-Continent pipeline artery, and it seems sure that there will be no immediate effort made to build a major pipeline into the field.

The first intimation of trouble came three weeks ago, when it was observed that crude oil storage was becoming congested. During the past 10 days, the Marland Oil Co., which is the largest purchaser of crude oil in the field, stopped running the oil from any leases excepting its own. This had a salutary effect upon drilling, and resulted in the shutting down of 100 wells. This move was closely followed by the Plains Pipe Line Co. announcing a reduction of 25 cents a barrel in the posted price of Panhandle crude. The remaining purchasers of oil have not met the reduction, and it is thought unlikely that they will, but in every case the runs of oil have been cut in half, and an executive who has just returned from Amarillo, believes that within three weeks almost any amount of crude may be purchased in the field for $1 per barrel.

Difficulties in Refining

The difficulties met in refining the oil are said to be numerous. One company which has purchased a considerable amount of Panhandle crude now finds itself with a stock of gasoline on hand which cannot be brought up to specifications required for its sale. The crude is said to have a great corrosive effect upon refining equipment, leaving salt sediment and other objectionable matter in the stills.

As this is written, many of the wells in the field are pinched in. Three com-

(Continued on Page 143)

Oil Industry's Stake in Good Roads

Billion Dollars a Year for Highways Contributed in Taxes by Oil Consumers. Greater Mileage Swells Consumption

Probably one of the most astounding things in American industrial life and of paramount importance to the oil industry is the fact that the states, countries, townships, road districts, etc., built over 2,900,000 miles of so-called "highways" before Congress decided that road building was a matter in which the national Government was interested.

And while we hear a great deal today about Federal aid in road building the fact is that, from a "dollars paid in" standpoint Uncle Sam, in 1924, put up $91,000,000 while all other sources of highway income provided $1,091,000,000. Uncle Sam furnished about 9 per cent of the total.

Probably nothing would be more misleading than to talk of roads in terms of miles. A mile of highway near one of our largest cities might carry 25,000 vehicles a day—and a mile out on the plains or in the Rockies a dozen—and yet "statistically," and as a part of the sum total, each is "a mile of road." According to a recent survey made by the United States Bureau of Public Roads, 7 per cent of the roads of Maine carried 53 per cent of the traffic. Happily, we are today following the policy of building roads to fit the traffic they will be called upon to bear. A $25,000-a-mile highway near a large city is undoubtedly a better investment than a $500-a-mile "road" in an isolated, undeveloped rural district.

It took 140 years (1776 to 1916) for the United States Government to come to the point that it would have anything whatever to do with the building of highways—and then only with the sates as equal partners.

To Build 200,000 Miles

And in this partnership agreement two things are outstanding in the attitude of the National Government: First, the Government will co-operate in the building of a grand total of something over 200,000 miles out of a grand total for the entire country of over 3,000,000 miles. Second, the states must maintain these highways after they are built.

Yet, the entrance of the National Government into our snarled disjointed highway problem instantly crystallized the idea that the Nation needed a national highway system—both for peacetime and for possible emergencies. Viewed as a national proposition, the Government engineers have estimated that some 200,000 miles of highway, built according to their specifications, would give us everything we needed in the way of interstate, transcontinental systems.

The first law, called the Federal Aid Road Act, went into effect July 1, 1916. Under the spur of war conditions this act was supplemented by specific provision for a 3-year program in the Post Office Appropriation Bill of 1919. Then came the Federal Highway Act of 1921 with a 3-year program which, since its expiration, has been continued by shorter term appropriations the last one being made in the closing days of the Congress just recently adjourned and continuing the work to June 30, 1929. The following tabulation sets forth the details of these several Federal Acts:

MORE ROADS NEEDED FOR CARS MEANING MORE GASOLINE USED

The oil industry depends in a large measure for the future expansion of its market for gasoline upon the continued growth of road building, opening new highways to the motorist and increasing facilities for bus and truck travel.

Only a little more than one-half of the 270,000 miles in the highway systems of the states is surfaced, less than 146,000 miles. At that rate there are 137 motor vehicles now for every mile of surfaced road.

Road congestion has a tendency to discourage pleasure driving. In addition to the wider invitation and convenience of new highways provision must constantly be made to provide more room for traffic.

Program Enlarged

The mileage to be built through Federal aid has been increased from time to time and today totals 200,349 miles. When the Federal Highway Act was approved in 1921, it was estimated that the entire program could be completed in 10 years. Half of the time has elapsed—and at the present rate the entire work will be completed by about the summer of 1931.

The completion of this, the most stupendous road-building program in the history of the world, will mean that practically every town in the United States, of 5,000 and over, will be on this great highway system. It will also mean that, of the entire population of the United States, over 90,000,000 people, will live within a zone 10 miles wide on each side of these "good roads." And it also means that, barring washouts and the heaviest winter snows, you can travel over this vast system, touching every corner of the United States, 365 days in the year.

We are today "raising and spending" money for highway building at the rate of more than $1,000,000,000 a year—and it is one among our "best investments" to promote both industry and the individual.

HIGHWAYS TAXATION PAID BY OIL CONSUMERS

Gasoline	$ 143,000,000
Motor license	263,500,000
Prop. tax on cars	150,000,000
Fed. tax	143,430,709
City tax, wheelage, etc.	50,000,000
Property, income, corp. prod. on oil and allied industries	345,000,000
Total	$1,094,930,709

Table 2—Highway Income and Expenditures

Income, 1924—	
Taxes and appropriations	$ 541,000,000
Motor Vehicle fees and gaso. taxes	267,000,000
From sale of bonds	259,000,000
Federal Aid	91,000,000
	$1,158,000,000
From 1923 Bal.	24,000,000
Total	$1,182,000,000
Expenditures, 1924—	
Construction	$ 637,000,000
Maintenance	297,000,000
Mach., equipt., etc.	139,000,000
Bonds, pd. on princ.	80,000,000
Int. paymts.	29,000,000
Total	$1,182,000,000

Table 3—Analysis of Expenditures as Set Forth in Table 2.

By States—	
Construction	$ 381,000,000
Maintenance	105,000,000
County funds, etc.	31,000,000
Administration-Eng.	28,000,000
Int. payments	22,000,000
Princ. paymts. of bonds, notes, etc.	17,000,000
Mach., equipt., etc.	19,000,000
Miscellaneous	3,000,000
Total	$ 606,000,000
By Counties, Etc.—	
Construction	$ 256,000,000
Maintenance	192,000,000
Princ. payments of bonds	63,000,000
Int. payments	7,000,000
Miscellaneous	50,000,000
Overhead, as reported	8,000,000
Total	$ 576,000,000
Grand total	$1,182,000,000

Showing to Motorists

For a good many years statisticians have been compiling figures covering practically every phase of the cost of operating motor cars and motor trucks over every possible kind of road and under every conceivable condition. Vast masses of figures have been assembled, the details of the making of which it is not necessary to include in this article. However, the approximate net result can be stated briefly—that in operating a motor car the difference between the average well-built road and a poor road (and the word "road" means all roads outside of towns and cities) is at least 1½ cents per mile—and for motor trucks 2 cents a mile. This difference has to do only with the increased amounts of gasoline and lubricating oil and the greater wear on tires in traveling over country roads. It has been estimated that the "saving" in operating costs represented by these three items totals today about $750,000,000 a year.

This $750,000,000 a year, however, represents only the "money saved" by having good roads. There is another and probably a greater gain—the value of "time saved" to the millions of drivers of cars and trucks over good roads.

The essence of transportation today is "time"—and the two quickest results that you get out of a mile of good highway are "less cost and more speed." We have heard a great deal about the "less cost," expressed in dollars—but we haven't heard much about the value of the time saved by good roads as compared with poor ones.

Time Saved in Money

If 60 per cent of today's total registration of cars and 100 per cent of the trucks registered in the United States are used for business purposes (and this estimate is probably low)—and if the cars and the trucks used for business purposes make half of their mileage over country roads (and this is also conservative)—and if the "time saved" by their traveling over good roads instead of poor ones is worth 25 cents a day (15 minutes saved at $1 an hour) the single item of "time saved" would amount to over $3,000,000 a day—or over $1,000,000,000 a year.

And this staggering sum brings us back

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Table 1. Federal Appropriations for the Co-operative Building (with the State) of Rural Post Roads and Forest Roads and Trails for the fiscal years ending June 30.

	Federal Aid Road Act		P. O. Appropriation Bill		Federal Highway Act	
Year—	R.P.R.	F.R.& T.	R.P.R.	F.R.& T.	R.P.R.	F.R.& T.
1917	$ 5,000,000	$ 1,000,000	.....	.....	.....	.....
1918	10,000,000	1,000,000	.....	.....	.....	.....
1919	15,000,000	1,000,000	$ 50,000,000	$ 3,000,000	.....	.....
1920	20,000,000	1,000,000	75,000,000	3,000,000	.....	.....
1921	25,000,000	1,000,000	75,000,000	3,000,000	.....	.....
1922	.....	1,000,000	.....	.....	$ 75,000,000	$ 5,000,000
1923	.....	1,000,000	.....	.....	50,000,000	10,000,000
1924	.....	1,000,000	.....	.....	65,000,000	6,500,000
1925	.....	1,000,000	.....	.....	75,000,000	6,500,000
1926	.....	1,000,000	.....	.....	75,000,000	7,500,000
Total	$ 75,000,000	$ 10,000,000	$200,000,000	$ 9,000,000	$340,000,000	$ 35,500,000

Grand Total Appropriated to June 30, 1926, $669,500,000.

OIL COMPANIES INTERESTED IN GOVERNMENT'S SODA ASH TESTS

By L. M. Fanning
New York Bureau, The Oil and Gas Journal, 30 Church St., New York

NEW YORK, Aug. 9.—While it is understood that the soda ash process for the recovery of crude oil left in the ground after usual drilling methods have been employed, developed by Dr. P. G. Nutting, geophysicist of the United States Geological Survey, has not come up directly for consideration of the research committee of the American Petroleum Institute, handling suggestions for donations under the Institute's $500,000 research fund, this and other methods designed to increase the yield of oil from the sands are receiving attention. It is apparent, however, from the subjects suggested for research under the institute's fund that projects of a more strictly fundamental nature will receive precedence for the time being and possibly until such time as the fund is increased and the work on research enlarged.

Interest in the Government's work on oil recovery has been shown by various oil companies. Doctor Nutting's experiments have been regarded as important, and the results as published in The Oil and Gas Journal of July 29, received favorable comment on the part of engineers familiar with this type of research. The work in the Bradford Field has long been considered of major importance in connection with increasing the yield of oil from the sands, this applying to the water flush method which has been in successful operation for a good many years.

May Require Two Years

Executives of oil companies interested in production would not indicate whether they would proceed to license the Government's soda ash process when it is offered. As explained in The Oil and Gas Journal enough has been learned to satisfy those who have conducted the work on the soda ash process that the field experiment is thoroughly justified, although two years will be required to determine definitely whether the hoped-for results will be secured. The process, it was stated, will be open freely to anyone who wishes to experiment with it, and the preliminary work of protecting this method by patent rights under the control of the Government has been begun.

It is indicated that further results will be awaited before any considerable private investigation under the process is undertaken.

The geological projects for research suggested to the American Petroleum Institute by the Central Petroleum Committee of the National Research Council and which are being presented to the industry for criticism, do not go into the

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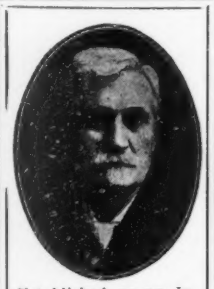

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FIXING THE PRICE OF GASOLINE

Who should fix the price of gasoline, the men who produce the raw material and manufacture it into motor fuel or a handful of handlers who peddle a small part of it to the public?

The weak spot in the oil business is that its prices are so often at the mercy of a few jobbers whose only interest is to buy as cheaply as they can no matter who loses.

Season after season this element clamors for reduced prices for gasoline, advising the trade to keep down the market by hand to mouth buying.

This year is no exception. Notwithstanding there is a steady increase in consumption, that there are more cars and much greater use of them, that for the first time in several years the oil industry is enjoying a season of prosperity largely because the producers and refiners have learned the lesson of adversity and profited by it, this faction which neither produces nor refines a gallon, seeks to knock the props from under the whole industry and throw it back into the condition of depression from which it is emerging.

It is not that they, too, have not had their lesson but simply that they have refused to learn it.

That lesson was the unity of the industry, of all its branches.

Instead, they continue to think only of their immediate personal gain, ignoring the fact that unless the producers and refiners are able to do business profitably production will decline and jobbers will have to pay more for what they can get. Cheap gasoline will then be impossible.

They shout about an enormous stock of gasoline on hand and predict a cut in crude as if that were the most desirable thing in the world.

No matter what the probabilities may seem to be and no matter how fortunate and skillful the industry has been in meeting the always increasing demand for its products, there can be no denying the uncertainty of the fluctuations in production of petroleum.

These stocks are not a burden to the consumer but rather a protection to him against famine prices in case of even temporary shortage. But according to the theory of the spokesman of these jobbers, the industry which carries the burden of these stocks as an assurance of supply, to jobbers as well as to the public, should be penalized by price reductions for the benefit of those who peddle a portion of its products.

This enormous gasoline stock of which they speak represents but 49 days' supply while the jobbing interests demanding cut prices never carry more than a few days' supply, which they obtain from refiners in the same position.

They entirely overlook the fact that they are getting gasoline from higher priced crude for less than they did a year ago.

They forget the burden borne by those who shoulder all the responsibility for maintaining the supply.

But if they had their storage full and some competitor down the street began selling below their cost they would protest.

So here are the whole producing and refining industries upon which the country depends for its continued supply of oil and gasoline, taking all the hazards of oil finding and producing, all the risks of manufacturing and marketing, having their entire investment subject to demoralization by individuals whose sole concern is the profit to be made in handling petroleum products.

On the one hand there is the bulk of the billions of dollars invested in oil production, refining, transportation and distribution extending from the original survey of the geologist through all the ramifications of the industry, the millions lost in dry holes and unprofitable wells, the danger of overproduction wiping out values over night, the laying of pipelines and the building of storage that may never be needed, the fluctuations in prices of finished products due to new discoveries, new methods or new processes.

There is no business so hazardous as the oil business without the added handicap of having the prices of its products determined by those who merely handle them.

Is it any wonder that there is a constant trend towards the expansion of company-operated stations, that producing and refining companies are getting tired of having their markets upset by virtual outsiders whose business is dependent on their products?

The spokesman for these very jobbers says in a postscript that "the tendency of refiners to continue their policy of buying out jobbers and expanding the number of stations they operate themselves should eventually stabilize marketing conditions."

If that is the way to stabilize marketing conditions in his opinion, how can he reconcile it with the position he takes?

Marketing conditions can never be stabilized as long as values can be affected by the clamor for bargain prices.

The sensible thing, the profitable course, for all concerned is to seek a stabilization of prices that will have a proper relation to costs which will permit the continuance and prosperity of the industry's operations as a whole.

That will be to the advantage of the sellers of the finished products as well as the producers and the manufacturers.

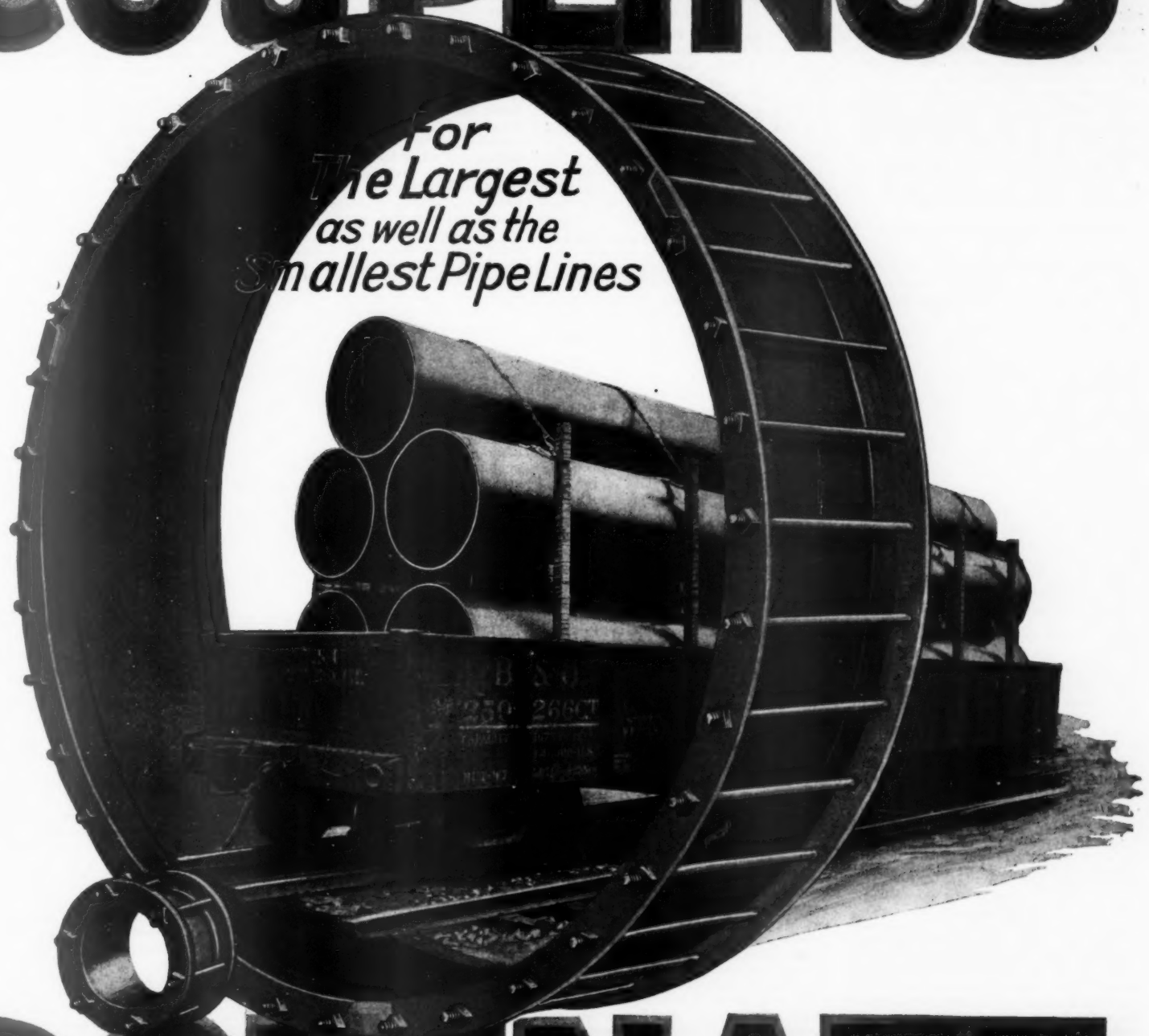
There is an opportunity this season to pursue that policy. The public is getting its money's worth in gasoline and is not agitated over prices. It ill becomes anyone in the oil business to rock the boat.

A. P. I. MEMBERSHIP

The present 3,500 membership of the American Petroleum Institute has been attained without any general invitation ever having been issued. The first general suggestion regarding membership has just been sent out by Captain J. F. Lucey, chairman of the membership committee, which feels that "every man with a financial interest—large or small—in the oil industry, in justice to that interest, ought to be a member of the Institute. No matter what branch he is engaged in, producing, refining, marketing, natural gasoline, compounding, transportation, pipeline, tank car, or supply men—all have a community of interest in overall problems of vital concern. The Institute is playing an important part in their business relationships and should have their active participation."

A more general personal interest, with greater numerical membership would mean solidarity, wider influence and enlarged usefulness for the Institute and the industry at large. The Institute, it should be remembered, is an association of men, of individuals, not of companies—corporations, companies or partnerships are not eligible. But every man engaged in the oil industry and allied industries is eligible and should be represented.

DRESSER COUPLINGS



DOMINATE

S.R. DRESSER MFG. CO. BRADFORD, PA. U.S.A.

Technical Questions Answered

BY CHARLES K. FRANCIS, PH.D., TECHNICAL EDITOR

The Question and Answer Department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation.

Those connected with the marketing departments and others interested in the utilization of petroleum products are also invited to take advantage of this service.

Questions should be submitted in as much detail as possible so as to assure a satisfactory answer.

SPECIFIC HEAT AND LATENT HEAT

Will you be kind enough to give me an explanation of the difference between the terms specific heat and latent heat?—W. F. D.

All substances absorb heat when they are subjected to an increased temperature. In the case of a solid substance the absorption of an almost constant quantity of heat will take place with each degree of rise of temperature until a further application of heat will produce a change in the substance, this is known as the specific heat of the solid.

Sometimes this change will be visible by the change from the solid to the liquid form. At this stage there will be no rise in the temperature of the substance itself, but the heat will be absorbed in the liquid. The quantity of heat so absorbed per pound of the substance is known as the latent heat of fusion.

When a pure liquid is brought to the boiling point any further application of heat will not cause any additional increase in the temperature of the liquid but it will change its form, that is it will become a vapor, and the vaporization will continue until all of the liquid has evaporated. The heat which is used in causing a pound of a liquid to change into a vapor is known as the latent heat of vaporization. If the heating is continued the vapor will absorb heat at a definite rate and this rate is known as the specific heat of the vapor.

Latent heat is consumed in doing work, such as the melting of ice, and therefore appears to be lost. Specific heat, as has been indicated, is a definite measure of the degree of the accumulation of heat.

VISCOSITY

Why is it that a paraffin base stock from the Mid-Continent Field with a viscosity of 140 at 210 deegrees Fahrenheit has a higher viscosity at 100 degrees Fahrenheit than a paraffin base stock from the Pennsylvania Field with a viscosity of 140 at 210 degrees Fahrenheit? Is it due to the arrangement of the hydrocarbons or to a trace of asphalt which may be present in the Mid-Continent oil?—V. A. B.

The lubricating oils from different crudes vary in the low temperature viscosities and it is thought that this difference may be accounted for by the fact that different hydrocarbons are present. It appears that the difference in composition is the answer to your question and the trace of asphalt and related compounds are influencing factors. The crudes from Texas, Louisiana and California are known to contain large quantities of naphthenes which are comparatively stable at the lower temperatures.

The various hydrocarbons which are found in lubricating oils tend to decomposition with elevation of temperature so that it is to be expected that two oils having similar properties will approach the same viscosity with rise of temperature. It may be said that in the neighborhood of 350 degrees Fahrenheit the two oils will have a common viscosity and that it will be very low.

CENTIGRADE AND CELSIUS SCALES

One of us claims that a temperature given as so many degrees C means Centigrade or Celsius with equal propriety, that is, that the two words are interchangeable? The other states that only one is proper, and we would appreciate it if you will settle the matter.—U. and S.

The thermometer scale used in scientific work is known as Centigrade. It was developed from a scale originally suggested by Anders Celsius (1701-1744), who divided the space between the freezing and boiling points of water into 100 parts. He designated O to represent the boiling point and 100 to indicate the freezing point of water.

This arrangement did not meet with favor but the general idea was convenient, so the scale was turned around and has been in use ever since. Zero representing the normal freeing point of water, and 100 the boiling point.

Conversion of Centigrade degree to Fahrenheit degrees may be made by multiplying by 9/5 and adding 32, or the opposite by subtracting 32 and then multiply by 5/9.

The mistake of speaking of the scale now used as Celsius in place of the correct word Centigrade is a common one.

HYDROGEN SULPHIDE, MARSH GAS AND NATURAL GAS

Is hydrogen sulphide and marsh gas inflammable and how is the best way to tell natural gas from the two?—R. G. L.

Marsh gas is another name for methane, CH_4, the lowest member of the open chain or paraffin hydrocarbons. It is a predominating constituent of natural gas. Hydrogen sulphide is found in some natural gas but it is not common. Both will burn.

Hydrogen sulphide is easily detected by its odor, which resembles that from a stale egg. Marsh gas has no odor and burns freely. Hydrogen sulphide does not burn so freely, and the odor of burning sulphur will be noticed, especially close to the flame. Marsh gas and hydrogen sulphide are frequently found in swamps and marshes, hence the name marsh gas. When found under these conditions marsh gas has no significance as an indication of a natural gas or petroleum deposit because it is a product of decomposing vegetable matter.

True natural gas is usually found under conditions which indicate a source of pressure, and a seepage may cover considerable ground; the flow may be uniform while a marsh deposit must be dislodged by means of stirring the mud with a stick or some other means.

STEAM AND THE GAS LAWS

How many kinds of steam are there and does steam follow the same laws as those which apply to gas?—L. L. K.

There are three forms of steam: saturated, unsaturated and superheated steam. Saturated steam contains all the water it is possible for it to hold under the existing conditions of temperature and pressure. Unsaturated steam does not contain all the water it is capable of holding under existing conditions. Superheated steam is frequently known as dry steam because it contains no water. All of these may be converted one into the other by proper adjustments of temperature and pressure.

The first two forms just mentioned are to a limited degree subject to the fundamental physical laws which apply to pure gases; because of the quantity of water they may contain there is introduced a variable which is not subject to accurate statement in a formula.

Superheated or dry steam does conform to the gas laws and all formulas used in calculations and the rules concerning general conditions for handling are equally applicable.

DECOMPOSITION OF SULPHUR COMPOUNDS

At what temperature and pressure do the compounds of sulphur, which are found in oil, decompose? Can this be done under the cracking temperature or pressure of the oil without depositing carbon and what would the resulting oil be like? We have an oil that contains combined sulphur that cracks readily but have trouble with corrosion, and would like to know if the splitting of the sulphur-oil compounds could be done at a lower pressure and without deposition of excessive carbon?—L. M. J.

The forms of sulphur found in petroleum are almost as extensive as the kinds of petroleum, so no definite reply is possible without positive information concerning the nature of the sulphur compounds. Uncombined sulphur boiling at 832 degrees Fahrenheit has been reported to have been found in some petroleum, then advancing from this to a large group of hydrocarbon compounds which contain sulphur in the combined form. In addition to the organic sulphur compounds there must be considered the several inorganic salts containing sulphur, frequently found in crude oil.

The commonly found forms of the organic sulphides are those of the type represented by methyl sulphide. Another group is that known as the thiophanes, found especially in the larger molecule group, including and above $C_7H_{14}S$.

Of course the sulphur given off at low temperatures usually come from hydrogen sulphide which is dissolved in the oil. Evidence of decomposition has been obtained pointing to initial decomposition around 300 degrees Fahrenheit, but as previously indicated, this may mean nothing for general application because the properties of the individual crude must be considered.

Cracking cannot be done without the separation of some carbon. The general rule is, the higher the temperature and pressure the greater the degree of cracking. Pressure is the factor which aids in the decomposition which otherwise would require a much higher temperature. The lowering of the pressure would not help you to get rid of the sulphur trouble, but it would have some influence of the yield of gasoline.

A sulphur problem is usually one requiring a study of the local conditions and demanding for its solution the application of special knowledge of a high order.

MOLAL VOLUME

What is the derivation of the molal volume which is used in certain gas volume calculations?—D. A. E.

This is sometimes called the molar volume or molar weight and is based on Avogadro's hypothesis, which is that in equal volumes of all gases, under like conditions of temperature and pressure, there are the same number of molecules. A molecule is a unit, such as two atoms of hydrogen or the smallest part of a compound like H_2O, representing a molecule of water. The hypothesis means that, if at some fixed temperature, a jar were to be filled with different gases successively, the number of molecules that the jar would hold at a fixed pressure will always be found to be the same.

We know that different gases differ very much in weight, and since the different weights of equal volumes represent the weights of equal numbers of molecules, the difference must be due to the unlike weights of the molecules themselves. The molecule of the free element in most cases contain two units or atoms, and for the elementary gas oxygen is represented by the formula O_2. The basis of our system of atomic weights is 16, the atomic weight of oxygen, and consequently the molecular weight of oxygen is 32, which in turn, is the same figure taken for the basis of molecular weights. Converting this weight to grams we have the gram molecular weight, which may be abbreviated to molar weight or simply mole.

It has been found that the molecular weight of a gas in grams will be very close to 22.39, or approximately 22.4 liters. This is known as the gram molecular volume or molar volume. These weights and volumes, as previously indicated, must be made under or reduced to standard conditions of temperature and pressure. It is plain that the gram molar volume may not be convenient and a conversion to pounds and cubic feet gives us another figure, which conforms to the ordinary units. When the weights are changed to pounds there is obtained the pound mole, which is equivalent to 359 cubic feet, and is known as the pound molal, or molar, volume. Then 359 cubic feet of any gas will, when weighed, be found to be the weight in pounds of the gas corresponding to the numbers used for indicating the molecular weight of the gas. If the gas is a mixture, the analysis may be used to convert the weight to the corresponding components.

The approximate composition of air may be used for the purpose of illustration.

Gases Pres.	Pct.	Mole part	Molclr. wgt.	Lbs. in 1 molal Vol.
Nitrogen	80	4/5	28	22.4
Oxygen	20	1/5	32	6 48

Weight of 1 mole of air=28.88 lbs.

This is an approximate figure because the quantity of carbon dioxide, argon and other rare elements known to be present in very minute quantities are not considered. The constant 28.88 or 28.9 will be found satisfactory for most calculations.

LUBRICATING AMMONIA COMPRESSOR

I have a lot of trouble with emulsions in the crankcase of our ammonia compressor and as the oil stands a good test for emulsion, would like to know the cause of the breakdown if possible.—C. W. A.

From your statement it appears that the fresh oil is free from water and any other foreign matter that may cause the oil to emulsify, so you must look for a leak, possibly around the piston rings. A very small quantity of water, especially in the presence of ammonia, will cause the oil to emulsify because of the mineral substances, always present in the water, forming petroleum soaps.

Emulsifications of this nature are very dangerous, as they tend to deposit semi-solid matter which will frequently prevent lubrication of the bearings and heating results. Under bad conditions which are permitted to continue over a sufficient period, the bearings may burn out.

Every precaution should be observed to keep the oil free from moisture and if the oil is in good condition before being placed in service there can be no question but that something is wrong within the compressor. This does not appear to be a breakdown of the oil.

Two 100,000 Bbl. Fields in Prospect

Spindletop and Texas Panhandle at New Heights. Coastal Pool Shrinks. Seal Beach Well Makes 1,200 Bbls.

Spindletop and the Texas Panhandle almost monopolized the attention of the industry during the week. The Coastal Dome ran its output up to over 82,000 bbls. on Friday with prospects of a peak of 100,000 bbls., but dropped to 73,000 bbls., some of the wells showing as high as 75 per cent water. In the Panhandle production mounted to over 88,000 bbls. with expectations of reaching 100,000 bbls. within a couple of weeks. This prediction is complicated by the congestion in transportation which is becoming exceedingly acute.

California came forward with the long-looked for discovery of a pool at Seal Beach, the Marland Co.'s No. 2 Bixby blowing in with 1,300 bbls. and doing 1,200 bbls. at last report. Conditions point to a period of town lot development.

In Oklahoma Seminole County continues to be the most interesting point. The Mid-Continent Petroleum Corp's No. 1 Grayson made 900 bbls. The Independent-Garland well is increasing slightly with no deeper drilling.

The Carter Oil Co.'s No. 1 Stewart started flowing 125 bbls. an hour and gauged 1,980 bbls. in the first 13 hours.

A gusher completion in Throckmorton County was the feature in north Texas the Humble Co.'s No. 1 Stubblefield, the old discovery well, making 2,360 bbls. from 3,878-94 feet. The Red Bank Co.'s No. 1 Parrott, the discovery well of the deeper sand, was completed in April for 425 bbls. and is still doing 309 bbls.

OKLAHOMA

The Carter Oil Co.'s No. 1 Stewart, SW cor. NE SW, Section 34-10-6 had the sand 4,089-95 feet and started flowing 125 bbls. an hour. For the first 13 hours it gauged 1,980 bbls.

Amerada Petroleum Co.'s No. 1, SE cor. SE, Section 36-10-9, found a show of gas and a hole full of oil in sand 3,798-3,800 feet.

Mulberry Oil Co.'s No. 1, NW cor. NE NW, Section 5-17-4, made 132 bbls. the first 24 hours from sand 4,083-86 feet and is now flowing 6 bbls. an hour.

Shaffer Oil Co's No. 1, NW cor. SE NE, Section 10-18-4, swabbed 125 bbls. from sand 3,925-26 feet and is shut down pending the erection of storage.

MICHIGAN

SAGINAW, Mich., Aug. 10.—Saginaw Prospecting Co.'s No. 1 Water Works Park Subdivision, north Saginaw, is showing for 20 bbls. at 1,838 feet. Same company's No. 1 John Bremer farm, Section 14, Saginaw Township, is showing 20 bbls. at same depth. The Sun Oil Co.'s No. 2 Schoenteit farm, Section 11, looks like a 20-bbl. producer at 1,838 feet, making 20 oil wells for the Saginaw Field.

CALIFORNIA

LOS ANGELES, Calif., Aug. 10.—Marland's Seal Beach well is doing 1,200 bbls. daily of exceptionally clean oil. Considerable leasing is being done in that area.

PANHANDLE

FORT WORTH, Tex., Aug. 10.—The Prairie Oil & Gas Co.'s No. 16 Johnson A, NW cor. SW SE, Section 21, Block Y, is flowing 2,000 bbls. natural at 2,907-90 feet, nearly a mile south of the Gulf's good wells in Mary Whitley Survey. McMan Co.'s No. 1 Johnson Gray, same section, is flowing 400 bbls. at 2,900-24 feet. Center Dome No. 1 Pritchard, Section 1, Block B 4, between Mary Whitley Survey and Block M-21, shot with 230 quarts at 2,720-75 feet, bridged and is cleaning out. The Prairie's No. 2 Johnson-A, Section 4, same bloock, is flowing 200 bbls. at 2,955-84 feet. Wilcox-Pampa's No. 4 Worley & Reynolds, Section 62, Block 3, Gray County, swabbed 55 bbls. in 6 hours from granite wash at 2,841-54 feet. It is drilling at 2,862 feet.

H. H. Adams' No. 1 Grove in northwest Eastland County, shot with 240 quarts at 3,756-3,852 feet, is making 150 bbls. but drilling little deeper.

Humble Co.'s No. 1 Stubblefield, Throckmorton County, flows 80 bbls. an hour natural and 125 bbls. hourly when agitated.

EAST CENTRAL TEXAS

Humphrey Corp.'s No. 2 Clapp, 1 mile east of its No. 2 Ousley, Cherokee County, got salt water at 4,360 feet and may be abandoned. No. 2 Ousley was abandoned last week after it had been given a shot at 3,385 feet and bailed dry. It had been drilled to 4,004 feet and plugged back. Humphrey Corp.'s No. 3, near Lone Star, Cherokee County, is drilling in chalk around 3,400 feet. The chalk is reported 200 feet higher in No. 3 than in the other two tests.

The Gulf Production Co. is blocking up acreage west of Bullard in Smith County, and the Humble Oil & Refining Co. in the western part of Cherokee County, around the Carey Lake region.

The Magnolia Petroleum Co. is drilling a test 14 miles southeast of Jacksonville, carefully coring the formations.

GULF COAST

HOUSTON, Tex., Aug. 10.—The Humphrey Corp. got its third well in the deep sand section at Sour Lake in No. 1-B Bashara, flowing 2,500 bbls. initially at 3,865 feet, 37 degrees gravity. No. 2-A Bashara was finished late last week at 3,935 feet, is flowing 1,520 bbls., 35.5 degrees gravity.

The Sun Oil Co.'s No. 1 McLean, in the deep area at Spindletop, which quit flowing, has been put on the beam and is pumping 800 bbls. per day. The Gulf Production Co. is putting No. 1 Weed, on the pump, and the Rio Bravo Oil Co. is putting No. 1 Right of Way on the pump, also.

The Atlantic Oil Producing Co.'s No. 2 McLean, rated at 3,000 bbls. initially late last week, is flowing 1,600 bbls. early this week, 23.2 gravity, temperature 90 degrees.

LOUISIANA-ARKANSAS

SHREVEPORT, La., Aug. 10.—The old Sugar Creek area in Claiborne Parish came under the spotlight when the Triangle Drilling Co.'s No. 1 Keen, Section 7-19-5, cored an oil sand with a trace of salt water at 4,506-07 feet. A lime formation was encountered directly beneath the 1 foot of sand. The lime was cored from 4,507-09 feet. Sugar Creek came into prominence some time ago when the Blossom sand was picked up in that area, high but carried only salt water.

SOUTHWEST TEXAS

SAN ANTONIO, Tex., Aug. 10.—There were 12 completions in the Mirando pools in Webb, Zapata and Jim Hogg Counties last week, two gas wells and the others oil wells, which added 2,550 bbls. flush production.

The biggest completion is Kitselman & St. Albans' No. 41 Holbien, in the pool northeast of the Henne, Winch & Fariss Pool, which came flowing at the rate of 1,000 bbls. a day. They completed also No. 42 Holbien, good for 150 bbls. Total depth of No. 41 is 2,151 feet and of No. 42 is 2,136 feet.

In the Bruni tract extension of the Aviators Pool, Killman completed No. 2 on Survey 835, good for 25,000,000 feet of gas. Rydal-Crown Central completed No. 17 Bruni in Block 43, swabbing at the rate of 500 bbls. Kennedy and Ball completed No. 5 Bruni, estimated at 100 bbls., at 1,726 feet, and Murchison & Fain and Ball completed No. 4 at 1,724 feet good for 110 bbls. Both are in the east half of Block 13. Staley & Wynne completed No. 17 Bruni in the west half of Block 18, good for 125 bbls., a total of 835 bbls. added to the Bruni production.

In the Randado Pool, there were four completions, adding 565 bbls. Houston Gulf Gas Co.'s No. 11 is swabbing 220 bbls.; Johnson and others' No. 7 is estimated at 75 bbls.; Simms Oil Co.'s No. 10 at 170 bbls.; and Magnolia's No. 8 at 100 bbls., all in Survey 291.

O. W. Killam completed No. 3 Lopez in the northwestern edge of the Cole Gas Field in Duval County, estimated at 45,000,000 feet.

O'Hern & Seacord have cored sand at 1,765 feet, in Survey 174, 5 miles south of the Cole Field in Duvall County and have ordered casing to make a test.

Associated Oil Co.'s west offset to the discovery oil well in the Carolina-Texas Gas Field in Webb County, completed at 2,595 feet, is a 40,000,000-foot gas well. The east offset has been deepened to 2,625 feet and bailed dry, except for a little gas. It was being bailed again today.

Barkley, Meadows and Morgan's No. 1 King Harper, 1½ miles north of the Cin-Tex discovery well in the Cole Field, has plugged off salt water at the bottom and came in swabbing at the rate of 600 bbls. of oil daily. It is estimated at 200 bbls. on the pump at 1,760 feet. The Gulf Co. is starting an offset to the south.

The Southern Gas Co. has bought the gas from the Henderson and Holden wells in Medina County and has ordered 4-inch pipe for a line from the wells to Hondo and may lay an 8-inch line to San Antonio.

A. P. I. TRANSPORTATION COMMITTEE DISCUSSES DOCKET AT CHICAGO

By J. B. Waldo

CHICAGO, Aug. 7.—The General Committee on Railroad Transportation of the American Petroleum Institute met at the Congress Hotel August 5 preceded by sessions of the Mechanical Subcommittee and the Car Service Subcommittee. There was an attendance of approximately 150, composed of interested oil men and representatives of railroads.

The report from the Car Service Subcommittee on the establishment of a Uniform Rate for Excess Empty Mileage suggested that the rate made be a uniform 6 cents per mile. The first suggestion was that the rate be at cost. The roads objected that cost was not the same in all parts of the country and might be difficult to determine. The next suggestion was that the rate be made 6 cents, the rate agreed upon arbitrarily between roads for the use of each others equipment. If this rate was fair between roads for owned equipment it should apply to equipment owned by oil companies who were practically in the same position as to ownership.

The committee's report on Side Track Agreement, read by W. R. Boyd, consisted chiefly of a statement from Lou Brenner, chairman, as to conferences with representatives of the A. R. A. The A. P. I. had submitted a proposed agreement which was not satisfactory to the roads and they in turn submitted a proposal which, while admitted better than the present conditions by most of those present, still had objections. The chief objections of members were in regard to the definition of sidetrack property and to the liability of both parties for damages to life or property on the side track. The railroad committee summitting this draft asked that the A. P. I. committee submit suggested changes. It was decided that each member be asked to write his ideas of the exact language of changes to Mr. Benner within 30 days and that these suggestions be studied and a draft made that would embody those that seemed necessary, the proposal as changed to be submitted to the railway committee.

The suggested definition of railway premises was laid before the committee by a letter from Chairman Crawford of the A. R. A., which suggested a change in the wording of storage Rule 6 which was approged by the committee and the A. R. A. will be so notified after consideration by the A. P. I. and final approval.

Calibration of Cars

"Calibration of Tank Cars" was put on the docket at the request of the traffic managers of the gasoline manufacturers. Mr. Boyd stated he had received a letter from Traffic Manager Roe of the Mid-Continnent Petroleum Corp., introducing James W. Hayes who stated briefly that his organization had reason to doubt the correctness of the gauging of tank cars and had cast about for some better way of determining their exact content. They had finally decided the way to measure a container for liquids was with a liquid measure. He detailed the methods by which a great liquid measure had been built up and its exactness tested and how tank cars were calibrated by the use of water measured in this prepared container. He stated that out of a great number of tank cars measured they had found just one in which the quantity as gauged on the car agreed with the contents as tested by their method. All others varied from 5 to 57 gallons. The suggestion was made that the committee recommend to the A. P. I. that it investigate this method of calibrating tank cars and if approved take it up with the A. R. A., the Master Car Builders and other organizations interested. This action was taken. Mr. Hayes stated his organization is preparing to build equipment for measuring all tank cars after its method.

In regard to the proposed specifications for tanks on tank cars it was suggested that this properly belonged before the mechanical section as it had to do chiefly with specifications for building such tanks on cars. The I. C. C. has specifications for tank cars but not for the tanks on cars which might be desirable in cases of accidents to tanks and their replacement. It was referred to the Mechanical Subcommittee.

Colonel Dunn's Suggestion

Proposed changes in I. C. C. regulations were considered, the first being the fixing of a maximum outage for cars loaded with explosives. A letter from Colonel Dunn stated there was a provision covering the minimum or compulsory outage for safety but it was possible

(Continued on Page 143)

Panhandle Completing Good Wells

Production 88,025 Bbls. and Expected to Go to 100,000 Within Two Weeks. Transportation Difficulties Increase

By C. D. Lockwood
Staff Correspondent, Texas Panhandle

The same old problem which has handicapped the Texas Panhandle from the time the first wildcat test was drilled out there is causing operators some sleepless nights now. That is the problem of transportation. The Panhandle production rose to 88,025 bbls. this week and could easily go over 100,000 bbls. in the next couple of weeks if there were any way of taking care of that amount of crude. But the pipelines are congested, the storage is full, and tank cars are scarce so that the oil and gas supervisor of the Texas Railroad Commission announced a fine of $5,000 for anyone drilling in a well or shooting one without sufficient tankage on the ground. Late reports from the field are to the effect that numerous drilling tests as well as some producing wells are being shut down.

The completion list of the past week, however, doesn't exhibit any tendency to curtail operations and some excellent producers were added to the field. The Marland Oil Co.'s No. A-3 Burnett, in Section 116, Carson County, mentioned last week as a record-breaking well, is still going strong. It dropped down to 1,360 bbls. Sunday and then was cleaned out to within 6 feet of bottom and started flowing again at the rate of 120 bbls. an hour. The Gulf Production Co.'s No. 14 S. B. Burnett, in the same section, was deepened 3,047-53 feet and flowed 390 bbls. in the first 24 hours. This is believed to be the upper pay as the elevation is 3,162 feet and that better production can be had with further deepening. No. 15 Burnett, in Section 106, Block 5, offsetting Marland Oil Co.'s No. 1-C to the east, was cleaned out 5 feet off bottom and had 100 feet of oil in the hole, at 3,032-38 feet. The elevation of this well is 3,152 feet.

In Hutchinson County, Marland Oil Co.'s No. 2 Johnson-A, in Section 20, Block Y, which was shot August 5 with 80 quarts at 2,945-66 feet and bridged, flowed 585 bbls. Sunday, then the bridge was knocked out and it made 459 bbls. in the next two hours and was flowing at the rate of 195 bbls. an hour afterward.

The Gulf Production Co.'s No. 4-A Whittenburg, in the Mary Whitley Survey, flowed 2,560 bbls. in the first 24 hours after a shot and at latest report was holding up to 95 bbls. an hour.

Daily Average Production of Amarillo District, Week Ending August 7

Hutchinson County

Company—	Well	Daily Av.
Amerada Petroleum Corp. — J. A. Whittenburg	1	15
Amerada Petroleum Corp. — J. A. Whittenburg-B	1	10
Amerada Petroleum Corp. — G. A. Whittenburg	1	65
American Refg. Co.	1	120
Apex Oil Co.	2	145
Badger Oil Co.	1	100
T. C. Barnum	1	20
Canadian River Oil Co.	4	310
Canyon Oil & Gas Co.	3	4,200
Centerfield Oil Co.	1	0
Coble-Whittenburg	3	995
Cockrell-McIlroy Oil Co.	2	1,250
Currie Bros. & Phillips	1	2,150
Derby Oil Co.	2	360
Devonian Oil Co.	3	2,385
Dixon Creek Oil Co.	19	13,250
Double 5 Oil Co.	1	65
Douglas Oil Co. & Cline	1	25
Dunnigan et al	1	350
Echo Oil Co.	1	225
Empire Gas & Fuel Co.	3	835
Fly Blackburn Oil Co.	1	250
Gates Oil Co.	4	280
Golding & Phillips	1	0
Gulf Prod. Co., Panhandle & Cline	11	3,100
Gulf Prod. Co.	9	2,700
Heywood et al	2	105
J. K. Hughes Dev. Co.	9	1,200
Holmes, Currie & McKnight	1	230
W. H. Holmes	1	200
J. H. Lennix	1	10
Lennix & Patterson	1	1,025
Lucky 10 Oil Co.	1	1,500
Marland Oil Co.	8	1,100
Midwest Exploration Co.	3	350
McMan Oil & Gas Co.	7	4,240
McIlroy & Herring	4	700
S. D. & W. W. McIlroy	3	1,070
McIlroy Bros. et al	3	325
J. H. Middleton	3	30
Murchison & Fain	1	30
Newby Oil Co.	1	30
New Domain Oil Co.	3	115
Phillips & Heywood	1	290
J. R. Phillips-Weatherly	1	30
Phillips Petroleum Co.	39	17,865
Prairie-Weatherly	4	200
Relief Oil Co.	2	650
Riley & Holmes	1	360
Roxana Pet. Corp.	6	2,400
Ryan Pet. Corp.	2	200
Shamrock Pet. Co.	1	25
Skelly Oil Co.	6	745
Skiatex Oil Co.	3	1,000
J. L. Smith	1	65
Smith & Bynum	2	390
Spring Creek Oil Co.	2	755
Summit Oil Co.	2	500
Sunny Jim Oil Co.	5	750
Sunburst Oil Co.	1	350
Travelers Oil Co.	2	385
J. D. Ward	1	150
J. D. Ward et al	1	0
Westex Oil Co.	4	3,160
White Eagle O. & R. Co.	6	1,500
J. O. Whittington	1	0
Total Hutchinson County	226	79,185
Average per well		350

Carson County

Amarillo Oil Co.	1	0
American Refg. Co.	4	420
Gates Oil Corp.	1	10
Gulf Prod. Co.	10	550
Marland Oil Co.	10	3,280
W. W. Silk et al	2	65
Skelly Oil Co.	2	90
Sunny Jim Oil Co.	2	30
The Texas Company	9	160
Total Carson County	41	4,595
Average per well		112

Gray County

Shamrock Pet. Co.	2	1,400
Wilcox-Pampa Oil Co.	4	2,500
The Texas Company	1	10
Empire Gas & Fuel Co.	1	20
Total Gray County	8	3,930
Average per well		491

Potter County

Amarillo Oil Co.	1	30

Wheeler County

Gibson Oil Corp.	2	185
Continental Oil Co.	1	80
Midwest Exploration Co.	3	20
Upton Gas Co.	1	0
Total Wheeler County	7	285
Average per well		40
Grand total Panhandle	283	88,025
Average per well		311

Hutchinson County

Amerada Petroleum Corp.'s No. 1 J. A. Whittenburg-B, SW cor. NW, Section 89, Block Z, was shot with 50 quarts at 2,985-3,036 feet and again with 510 quarts at 2,985-3,035 feet and was completed for 60 bbls. Apex Oil Co.'s No. 2 Smith, Section 11, Block Y, was flowing 400 bbls. naturally from lime at 2,768-82 feet. Canyon Oil & Gas Co.'s No. 1 J. A. Whittenburg, Section 12, Block Y, flowed 300 bbls. from lime at 2,763-2,812 feet, total depth 2,819 feet. Devonian Oil Co.'s No. 2 Johnson, in the George E. Montgomery Subdivision of the Mary Whitley Survey, was given a second shot of 210 quarts placed at 2,878-2,963 feet, total depth 2,972 feet and flowed 2,000 bbls. the first 24 hours. The same company's No. 3 Johnson was flowing 400 bbls. naturally from pay at 2,890-2,922 feet.

Empire Gas & Fuel Co.'s No. 1 Johnson-A, Section 68, Block 46, was shot with 160 quarts at 2,898-2,931 feet and flowed 250 bbls. Golding & Phillips' No. 1 J. T. Hodges, in Section 1-A, Block M-26, was plugged back from 2,817 feet to 2,790 feet and shot with 120 quarts at 2,733-87 feet and made 40 bbls. W. Scott Heywood's No. 1 Christian, in Section 31-A, Block V, offsetting the Gulf Production Co.'s No. 1 Dial, was shot with 600 quarts at 2,945-3,104 feet and responded with 160 bbls. initial.

J. K. Hughes Development Co.'s No. 1 Kingsland-B, total depth 2,831 feet, was shot with 60 quarts at 2,791-2,831 feet and swabbed 200 bbls. while cleaning out. This is in Section 6, Block B-4.

Marland Oil Co.'s No. 1 Johnson-A, in Section 20, Block Y, swabbed 200 bbls. at 2,898-2,939 feet; No. 2-A agitated and flowed 685 bbls. at 2,966 feet; No. 3-A flowed 850 bbls. after a 120-quart shot at 2,959-3,020 feet. The same company's No. 1 J. A. Whittenburg-A, in Mary Whitley Survey, was swabbing 290 bbls. at 2,928 feet; No. 3-A was swabbing 1,700 bbls. at 2,966-3,003 feet; No. 5-A swabbed 250 bbls. at 2,960-3,004 feet.

McIlroy & Herring's No. 3 Smith, in Section 5, Block Y, was shot with 270 quarts at 2,770-2,816 feet and made 500 bbls. McMan Oil & Gas Co.'s No. 6 Smith, in Section 5, Block Y, flowed 300 bbls. from lime at 2,698-2,740 feet; No. 1 Johnson-Ray Wheatley, in Section 66, Block 46, made 100 bbls. following a shot of 120 quarts in the lime at 2,844-2,905 feet.

North of Canadian

Murchison & Fain's No. 1 W. D. Twitchell in the Mary Anglin Survey, north of the Canadian River, was good for 560 bbls. the first 19 hours after a shot of 150 quarts at 2,912-50 feet. Phillips Petroleum Co.'s No. 2 Johnson-Barnum, Section 64, Block 46, swabbed 100 bbls. at 2,796 feet, total depth. Same company's No. 3 Johnson-Graham, NE cor. Tract 5, Mary Whitley Survey, swabbed 20 bbls. and was cleaning out to shoot; No. 1 Hagy-Johnson will be completed as a gasser at 2,735 feet; No. 2 Whittenburg-Huff was shot with 80 quarts at 2,852-84 feet and was flowing 200 bbls. daily and cleaning out. This is in Section 12, Block Y. No. 4 Whittenburg-Huff was good for 300 bbls. after a shot of 60 quarts at 2,852-82 feet.

Phillips Petroleum Co. and Gibson Oil Corp.'s No. 2 J. A. Whittenburg, Section 63, Block 46, flowed 200 bbls. after a shot of 100 quarts at 2,830-70 feet; No. 3 made 1,000 bbls. following a shot of 100 quarts at 2,722-73 feet; No. 4 flowed 75 bbls. naturally from the lime at 2,710-84 feet, total depth 2,785 feet. Phillips Petroleum Co.'s No. 4 Whittenburg-Jerry, in Section 13, Block Y, was a 1,200-bbl. well after a shot of 100 quarts at 2,849-2,900 feet.

Prairie Oil & Gas Co.'s No. 8 Johnson-A, Section 64, Block 46, was shot with 100 quarts at 2,945-65 feet and made 700 bbls. Ryan Petroleum Co.'s No. 2 Johnson, SE cor. Tract 9, Mary Whitley Survey, swabbed 100 bbls. at 2,998 feet and was cleaning out to shoot. Shamrock Petroleum Co.'s No. 2 J. A. Whittenburg was flowing 50 bbls. at 2,840 feet. Skiatex Oil Co.'s No. 4 Kingsland, in Section 6, Block Y, was shot with 570 quarts at 2,720-2,847 feet and the 6-inch collapsed. It was making 200 bbls. daily, however. Sunburst Oil Co.'s No. 1 Smith, NE cor. NW SW, Section 14, Block Y, flowed 600 bbls. after a 90-quart shot in lime at 2,940-95 feet. Sunny Jim Oil Co.'s No. 2 J. A. Whittenburg, in Section 12, Block Y, was flowing 300 bbls., 20 per cent water at 2,948-74 feet, total depth 2,975 feet.

Triangle Oil Co.'s No. 3 Smith, in Section 5, Block Y, was good for 2,000 bbls. at 2,624-63 feet. White Eagle Oil & Refining Co.'s No. 1 Johnson-Grace, in Section 4, Block B-4, flowed 130 bbls. at 2,788 feet; No. 4 Smith made 500 bbls. after a 100-quart shot at 2,733-73 feet, total depth 2,790 feet.

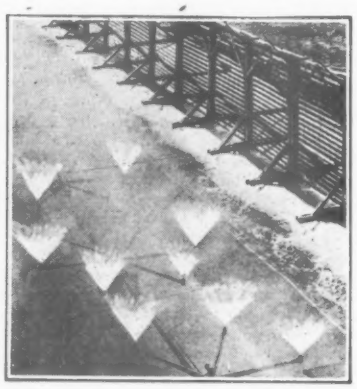
SALT WATER FROM OIL WELLS TURNED FROM COSTLY WASTE INTO BIG PROFIT

By J. L. Dwyer

The only plant in the world which takes salt water brine from oil wells, utilizes its component parts, and makes various salt products from the brine, is located at Sand Springs, Okla. It is being operated by the Sand Springs Chemical Co., in which Charles Page is interested. The process is the invention of Otto V. Martin, Ph. D. (Chicago) and its importance to the oil industry may be gauged by the fact that it takes salt water which has been a constant source of trouble and litigation to the oil producer, and not only eliminates it as a matter of grief, but actually converts it into a source of profit. That the oil industry is responding to the new process is indicated by the report that the Standard Oil Co. of Louisiana is interested to the extent of applying for permission to use it.

Otto V. Martin, inventor of the process.

The plant and process are the result of extensive research work by Doctor Martin, who has specialized in chemical engineering. In examining salt water brine from various producing strata in Oklahoma, he has inspected many fields, and finds that the only salt water which may be treated with good results in his process, is the brine from the Wilcox sand. There have been instances where the brine from sands said to be other than the Wilcox, has practically the same composition as the Wilcox brine, and in a few instances the brine from the Wilcox was found unsuitable to the process.



A close view of the spray nozzles in the salt vat.

The brine is transported from the field by pipelines. At the plant it enters the first tank, where silica, iron oxide and impurities are removed. By way of illustrating the numerous by-products of the

(Continued on Page 143)

A cracking plant can be either the heart of a refinery or merely an adjunct to it, depending on the cracking plant's limitations as to charging stocks, but the Dubbs, and only the Dubbs, can be either or both

There is no fence around the kind of charging stock with the Dubbs Cracking Process It produces the highest yields with the greatest profit from the cheapest available oils

Universal Oil Products Company
Owners of the Dubbs Process
310 South Michigan Ave
Chicago, Illinois

Deep Gusher in Throckmorton County

Humble Co.'s No. 1 Stubblefield, Old Discovery Well, Makes 2,360 Bbls. Follows Red Bank April Completion

By C. D. Lockwood
Staff Correspondent, North and West Texas Fields

FORT WORTH, Tex., Aug. 9.—The discovery of gusher production in Throckmorton County through deeper drilling in the Humble Oil & Refining Co.'s No. 1 Stubblefield, old discovery producer in an upper lime pay, was easily the outstanding feature of the north Texas fields during the past week. The real discovery of this horizon which has yielded such good production in the new well is the Red Bank Oil Co.'s No. 1 Parrott in the SE cor. NE, Section 971, T. E. & L. Survey. This well was completed April 12, 1926, for 425 bbls. at 3,936-55 feet and August 6 was still gauging 309 bbls. The Humble Oil & Refining Co.'s No. 1 Stubblefield is in the SW cor. NE, Section 991, and made 2,360 bbls. from the gray lime

NORTH TEXAS

Reports of north and west Texas and Panhandle first locations will be found on Page 92.

at 3,878-94 feet. Another well due in soon is the Reiter-Foster Oil Corp.'s No. 3 Parrott, NW cor. SE, Section 971. It topped the sandy lime at 3,923 feet and drilled 6 feet in. It was flowing 10 bbls. an hour while setting the 5-inch casing. There are 13 wells drilling in this area, having been started because of the showing made by the Red Bank Oil Co.'s No. 1 Parrott. Several of them should be completed within the next few weeks.

The Winkler County wildcat, Westbrook and others' No. 1 Hendricks, has suffered several misfortunes but the latest is a fishing job. It is reported that the casing parted when it was being pulled to reset packer. The well had been put on the pump August 3 but had soon started pumping mostly water and it was in an effort to remedy this situation that the misfortune occurred.

ESTIMATED PRODUCTION
Week Ending August 7, 1926

	This Week	Last Week
Ranger District—		
Brown County	11,377	9,345
Callahan County	4,628	4,075
Coleman County	1,830	1,527
Comanche County	1,875	1,850
Palo Pinto County	459	445
Ranger County	5,575	5,683
Shackelford County	11,542	11,035
Stephens County	11,508	11,830
Total Ranger District	48,794	45,790
Wichita Falls District—		
Electra	16,302	16,045
Burkburnett	12,288	12,346
Iowa Park	4,410	4,329
Archer County	30,568	30,363
Clay County	558	531
Wilbarger County	15,221	15,143
Montague County	5,308	5,303
Young County	8,030	7,966
Jack County	200	199
Throckmorton County	455	460
Baylor County	130	140
Cooke County	227	87
Total Wichita Falls District	93,697	92,915
West Texas District—		
Big Lake Field	28,290	28,940
Crane County	305	660
Crockett County	1,094	1,020
Howard County	172	90
Mitchell County	3,572	3,690
Scurry County	52	54
Upton County	3,850	4,027
Total West Texas District	37,335	38,481
Grand total	179,826	177,186
Increase	2,640	

Completions—Archer County

American Refining Co's No. 1 Turbeville, 125 bbls. at 1,492½-94 feet. Kentucky Oil Corp.'s No. 2 L. N. Wilson-N, 35 bbls. at 1,401-08 feet. McCarty Oil Co.'s No. 1 Parrish Brothers, 55 bbls. at 1,582-94 feet; No. 3 Parrish Brothers, 40 bbls. at 1,595-1,601 feet and 1,602-04 feet. Richardson Oil Corp.'s No. 1 Turbeville, dry and abandoned at 1,483 feet, dry sand 1,481-83 feet. The Texas Company's No. 1 Turbeville-C, swabbed and flowed 375 bbls. at 1,532-38 feet.

Cook & Reeder's No. 2 Kunkel, pumped 125 bbls. at 1,165-70 feet. Gates and others' No. 4 Thomas pumped 75 bbls. at 1,147-66½ feet. T. H. Jones' No. 1 Turbeville bailed 2 bbls. an hour at 1,010-17 feet. King & Looney's No. 1 Slopansky was dry and abandoned at 1,500 feet with no sand. Marland Oil Co.'s No. 1 Thomas-B, 45 bbls. at 1,175-83½ feet. Pandem Oil Corp.'s No. 1 Abercrombie, 14 bbls. at 1,125-39 feet; No. 2 Hudson, 12 bbls. at 1,135-47 feet; No. 5 Thomas, pumped 80 bbls. at 1,152-67 feet; No. 1 Threet was dry and plugged at 1,505 feet, dry sand 1,119-20 feet. Reed & Wooten's No. 1 Baggett was estimated good for 5 bbls. at 686-703 feet but was shut down. United Producers' No. 2 Prideaux-B pumped 15 bbls. at 665-77 feet.

Baylor County

Hooser's No. 15 Mills was dry and abandoned at 1,455 feet.

Callahan County

Amerada Petroleum Corp.'s No. 2 Long, 100 bbls. at 1,387-1,402 feet, total depth 1,430 feet. Mississippi Valley Oil Co.'s No. 1 Cutbirth, dry and plugged at 2,512 feet. T. B. Slick's No. 1 McDonough made 250,000 feet of gas at 1,710-14 feet.

Clay County

Lone Star Gas Co.'s No. 21 Holloway was a failure at 2,040 feet. Western Oil Corp.'s No. 1 Matlock was also dry at 1,906 feet. Gresham and others' No. 1 J. F. Fry was abandoned at 1,004 feet and E. E. Jones' No. 1 Mullins was plugged at 968 feet.

Coleman County

Root's No. 1 Hubbard was dry and abandoned at 2,820 feet. Western Oil Sales Corp.'s No. 2 Dibrell made 50 bbls. at 1,905-39 feet, total depth 1,941 feet. Ross & Carter's No. 1 Timmins was dry and abandoned at 1,505 feet. Ross & O'Connor's No. 1 Stewardson was also a failure at 1,655 feet.

Cooke County

C. C. Lanier and Hoosier's No. 3 Hyman made 185 bbls. of oil and 40 bbls. of salt water at 1,259-64 feet; No. 1 Dennis swabbed 65 bbls. in 12 hours from sand at 1,272-81 and 1,288-92 feet.

Brown County

Amerada Petroleum Corp.'s No. 1 Fry in Section 621, Jesse Chaudoin Survey, made one flow of 35 bbls. from sand at 1,331-35 feet. Christie and others' No. 1 Hewley was dry and abandoned at 1,407 feet. Gibson Oil Corp.'s No. 1 White swabbed 40 bbls. at 1,359 feet. Gillespie's No. 3 Henson was shot with 20 quarts at 1,262-72 feet and made 15 bbls. afterward, total depth 1,280 feet. Hughes Development Co.'s No. 14 Arledge, shot with 20 quarts at 1,275-79 feet, total depth 1,288 feet, made 15 bbls.

Humble Oil & Refining Co.'s No. B-8 Allen, location abandoned; No. 1 Armstrong, 500 feet of oil in the hole at 1,373-75 feet; No. 2 Foster made 200 bbls. initially after a 20-quart shot at 1,164-86 feet; No. 5 Hodnett made 100 bbls. at 1,190-1,203 feet; No. 6-B E. P. and W. H. Kilgore flowed 750 bbls. from sand at 1,157-77 feet; No. 8-B made 150 bbls. at 1,155-81 feet; No. 5-C E. P. and W. H. Kilgore had 500 feet of fluid in the hole from sand at 1,164-76 and 1,178-80 feet; No. 2-D made 100 bbls. at 1,163-73 feet, total depth 1,174 feet; No. 3-D had 125 feet of oil in the hole at 1,177-83 feet and 1,196-1,200 feet; No. 3-B J. C. Kilgore was good for 350 bbls. at 1,146-63 feet; No. 6-B J. C. Kilgore made 40 bbls. at 1,148-70 feet, total depth 1,175 feet; No. 1 Kilgore Brothers was dry and abandoned at 1,350 feet.

Ingleright and others' No. 1 Edington was dry and plugged at 1,310 feet. McKenna's No. 2 Foster made 480 bbls. at 1,152-87 feet. McLester Oil Co.'s No. 1-A W. M. Wooldridge was a failure at 1,355 feet. Murphy's No. 1 Eubanks was shot with 20 quarts and estimated good for 5 bbls. afterward from sand at 1,205-13 feet. Root and others' No. 4 Suttles was shot with 15 quarts at 1,131-47 feet, total depth 1,152 feet and made 20 bbls. The Texas Company's No. 6 Edington made 142 bbls. at 1,275-87 feet. Williamson and others' No. 1 Wooldridge made 100 bbls. after a 40-quart shot at 1,212-40 feet. Arkansas Fuel Co.'s No. 1 Ferguson was dry and abandoned at 2,588 feet. Lightfoot and others' No. 1 Smith was also dry and plugged at 1,011 feet. Mitcham's No. 1 Hester was a failure at 1,210 feet.

Eastland County

Panhandle Refining Co.'s No. 1 McFadden was dry and abandoned at 1,695 feet. States Oil Corp.'s No. 4 Davenport was shot with 20 quarts at 1,845-91 feet and made 20 bbls. Texas Pacific Coal & Oil Co.'s No. 1 Van Norman fee had a hole full of water and was plugged at 1,560 feet; No. 1 Durocher bailed 20 bbls. at 3,690 feet. H. H. Adams and others' No. 1 Grove made 75 bbls. at 3,823-48 feet.

Hardeman County

Staley, Wynne and others' No. 1 Evans was dry and abandoned at 3,207 feet.

Jack County

Carpenter and others abandoned the location for No. 1 Jackson and the Baytex Oil Co. also abandoned the location for No. 1 J. M. Patton. Hester, Hawkins & Staley's No. 2 Snedeker pumped 15 bbls. at 789-92 feet. Wallace & Nichols' No. 1 Garner was dry and abandoned at 803 feet with no sand. Wellman and others' No. 1 Rollins was also dry and plugged at 850 feet with no sand.

Montague County

Farlan Oil Co.'s No. 1 Maddox made 105 bbls. at 874-90 feet. F. H. E. Oil Co.'s No. 7 R. Hinds-A made 50 bbls. at 886-910 feet. Humble Oil & Refining Co.'s No. 11 Hinds made 100 bbls. at 892-96 and 912-24 feet. Newblock Oil Co.'s No. 3 Maddox made 115 bbls. at 868-90 feet. Pure Oil Co.'s No. 1 Crow made 60 bbls. at 901-25 feet. Texhoma Oil & Refining Co.'s No. 9 Howard and others was good for 30 bbls. at 1,143-55 and 1,160-63 feet; No. 6 Howard and others made 50 bbls. at 1,135-53 feet; No. 7 Howard and others made 32 bbls. at 1,146-69 feet; No. 3 Rowland estate

(Continued on Page 140)

BETTER FACILITIES INCREASE SAN JUAN BASIN FIELD RUNS

By Special Correspondent

FARMINGTON, N. Mex., Aug. 6.—A marked increase in pipeline runs is turning attention to the San Juan Basin's producing wells and also the wildcat tests that are being put down in this territory. Since the pipeline from the Hogback Dome and the Rattlesnake structure went into operation the daily average was approximately 1,000 bbls. The potential production of the wells on these two structures, to say nothing about Table Mesa, which is now good for over 1,000 bbls. per day itself, was many times the amount of the daily runs, but the Denver & Rio Grande Western Railroad, which was the only available means of transportation, was short of equipment to handle a greater amount. This railroad has made arrangements to approximately double its oil carrying capacity on the narrow gauge line which is the outlet for the San Juan Basin fields and considerable of this new equipment is being used with the result that the production figures for June show a very large increase for this field. To be exact the total for Hogback Dome during June was 14,280 bbls. and for Rattlesnake 62,498 bbls., making a total for both structures of 76,778 bbls. as against a monthly average formerly of about 30,000 bbls. That this increased shipment is being kept up is shown by the daily average for the week ending July 24 when the Rattlesnake shipped a daily average of 1,220 and the Hogback 725 bbls. The rate over the Santa Fe Railroad to the Gulf of Mexico from Gallup becomes effective today, when shipments from Rattlesnake and Table Mesa wells will begin through the new 92-mile pipeline and may again increase the daily average pipeline run from this field.

Reaches Picture Cliff Sand

The Ross-Bloomfield Royalties Co., operating in the Bloomfield district, has reached the base of the Picture Cliff sand at a depth of 2,230 feet and has only a slight showing of oil. It has some 20 or 30 feet further to go in the sand but it is not believed likely that production will be encountered in it at that point. The sand is very fine and the oil that is encountered seems to be dead and is not flowing. This well is a doodle-bug location and is the first test in that district to reach the Picture Cliff sand. This by no means proves that the Picture Cliff will not be productive at points in the San Juan Basin, but it simply proves that it is not oil bearing at that particular point according to the opinion of competent observers. It is likely that this company will put down another test in that district.

The Hall well on the Red Mesa structure, Section 13-33-12, has been the subject of various reports this week. This well, which is something over 3,500 feet deep, has had a liberal showing of oil in the last 400 feet. This is in a shale seepage although the log shows that the shale contained from 5 to 25 per cent of sand in the stratas that gives the oil flow. Another interesting feature of this well and oil is that the oil is a heavier gravity than that which has been found in the Dakota sands at other points in the San Juan Basin, being about 42 gravity. They are still drilling but are being troubled with caving and are lowering their 5⅜-inch casing as they go on down. It is conservatively estimated that the well if drilled no further and put on the pump would produce from 10 to 15 bbls. per day and maybe more.

The well of the Durango Oil & Gas Co., which is located about 6 miles north of Durango, on the Lattin deeded tract, spudded in Saturday. It starts in the base of the Red Beds and has for its objective the Pennsylvania formations which it is expected will be encountered at a depth of about 1,500 feet.

The Portage Oil & Gas Syndicate, op-

(Continued on Page 139)

Significant extracts of decision rendered in favor of the Moore Derrick (Neill patent) by the U. S. Court of Appeals for the Third Circuit.

SECOND INSTALLMENT

(to be continued in next issue)

"The derrick of the patent, though lighter, is stronger than any shown in the art, and though not presenting the first clamp joint socket, it employs one that disposes of the problem of weak joints in tubular structures.

"The structure is more durable in service and transportation, thereby appreciably reducing loss by damage and decreasing cost of labor in those operations, which have always been important economical considerations in the use of derricks.

"With the derrick of the patent it is testified that the only loss customarily occurring is the loss of nuts and bolts.

"The saving in labor cost is effected and measured by the substitution of common labor for skilled labor.

"While its original cost is greater than of a wooden derrick, yet because of its durability and economy in handling, its cost is less in the end.

"Its capacity to stand lateral wind pressure is an important element of economy, one witness testifying that out of 1000 wooden rigs he had seen as many as 200 blown down in one storm, while he had never had a Neill derrick blown down."

MOORE TUBULAR STEEL DERRICKS

Lee C. Moore & Co., Inc.
Established 1907
Pittsburgh, Penna. Tulsa, Okla.

Carolina-Texas Tests Disappointing

Associated-Usher Carson Well Bails Dry. U. S. Gas & Oil Co.'s No. 1 Benavides Gets Trace Oil and Lot of Water

By B. D. Stevenson
Staff Correspondent, Southwest Texas Fields

SAN ANTONIO, Tex., Aug. 9.—Disappointment of the past week in southwest Texas was registered when the Associated Oil Co. and Usher Carson bailed their No. 1 "A" Webster dry at 2,600 feet. It was the first well to reach the pay horizon since they brought in their No. 2 "A" Webster, on June 30, which is at this time making 320 bbls. of 34.2 gravity oil per day through five-eighths-inch choker. Another disappointment came the day following when the United States Gas & Oil Co. bailed its No. 1 Benavides in the northwest corner of Survey 679, a half-mile east of the Associated-Carson wells, and at 2,110 feet got a trace of oil and lots of salt water. It was on a different sand but the core taken had indicated a possibility it would find a second pay sand in the field.

Both wells are in the Carolina-Texas Gas Field. The Associated-Carson well tested shallower than No. 2 "A", which was completed before it. No. 2 "A" was reported to be 2,610 feet total depth. A recheck shows that it is actually 2,616 feet deep. The dip is toward No. 1 "A", which should have got the pay at below 2,616 feet. Instead, it tested at 2,600 feet because a core there looked too good to pass up. Liner was pulled the next day in No. 1 "A" and a 6-foot core increased the gas volume four times and got a distinct odor of oil. Additional cores were to be taken and there is a strong possibility that it will yet make an oil well. It is only 385 feet east of the discovery well.

Tested Salt Water

United States Gas & Oil Co.'s No. 1 Benavides, which tested salt water at 2,110 feet, had set 8-inch casing and has resumed drilling and will go down to the 2,600-foot sand. Carolina-Texas Field started as a gas field with wells making dry gas. Then some wet gas with as much as .41 of a gallon to 1,000 feet of gas was got in a well. A little later a well was completed making a trace of crude oil. Then another still better, and finally the Associated-Carson oil well at 2,616 feet. A 3,000-foot sand carried the highest saturation of gasoline and it is still a promising field for an oil pool. The United States Gas & Oil Co.'s No. 1 Benavides was the first at 2,100 feet to show oil in quantity and will encourage further wildcatting about the field for oil production even though it was a failure at that depth itself.

Bruni Extension—Webb County

Active drilling operations in the Bruni tract extension of the Mirando Field have dwindled from 45 a couple of weeks ago to 20 as outside locations on leases have been completed and rigs were pulled off and moved to the Carolina-Texas Field to rush tests down to the newly discovered 2,600-foot high gravity sand found a month ago by the Associated Oil Co. and Usher Carson's No. 2 "A" Webster.

Wells drilling in the Bruni tract proven territory this week and locations made and derricks up are as follows: Crown Central-Rydal Oil Corp.'s No. 16 Bruni, Block 17, located 2,014 feet from the north line and 200 feet from the east line, has the derrick up. No. 17, on the west half of Block 43, is drilling at 1,000 feet. Staley & Wynne's No. 16 Bruni, on the west half of Block 18, is drilling at 1,000 feet. No. 17 has set casing at 1,716 feet and should be in late this week. Nos. 18, 19 and 20, all on the same block, have each erected derrick and are moving in machinery. Kennedy-Ball have set casing in the northeast quarter of Block 13, in No. 5 Bruni, 720 feet from the north line and 150 feet from the west line, and Murchison & Fain-Ball have set casing at 1,720 feet in No. 4 Bruni, in the southeast quarter of Block 13, locate 510 feet from the north line and 150 feet from the west line.

Columbia Petroleum Co. is moving rig to No. 10 Puig, 337 feet east of No. 9 in Block 77 of the Edgington tracts, Sun Oil Co., which tested salt water in its No. 4 Bruni, in the east half of Block 45, located 950 feet from the west line and 200 feet from the north line, has abandoned the test at 1,701 feet. Sun Oil Co.'s No. 5 Bruni, 1,780 feet from the west line and 200 feet from the north line of the north half of Block 44 of the Bruni tracts, tested dry a week ago at 1,720-29 feet and is drilling deeper. Block 44 is next east of and adjoining Block 45. Associated is on a sand at 1,699 feet in No. 2 Bruni in the south half of Block 44, located 750 feet from the east line and 1,170 feet from the south line. Gibson Oil Corp. is drilling at around 1,000 feet in its No. 10 Bruni, on the south line of locations in the north 60 acres of the west half of Block 13 of the Bruni tracts, this being the last outside location on the lease to be drilled.

Stroube & Stroube's No. 1 Bruni has the derrick up in the northwest quarter of Block 19. In Survey 835, which is next west of and adjoining the Bruni tract subdivision, Harper and others have erected a derrick 150 feet from the north line and 200 feet from the east line of Survey 835 which is north of the Killam test. Simms Oil Co. is drilling at 1,200 feet in its No. 4 Bruni, in Survey 835, located 1,100 feet from the east line and 500 feet from the south line of the survey. O. W. Killam is drilling at 1,660 feet in No. 2 Bruni, in the north half of Survey 835, the location being 620 feet from the south line and 150 feet from the east line of the north half of the survey.

Mirando Field

In the older part of the Mirando Field, north of the Bruni tract extension and south of Mirando City, Kirkpatrick & Lucas got salt water at 1,804 feet in No. 1 Anderson, a half-mile east of production and near the south line of the Los Ojuelos Grant. It cored a good looking sand and for a time looked like something new for the field and a possible new sand or extension. The Kirkpatrick-Lucas No. 1 Puig, which is considerably east of production in the Puig tracts, is standing at 1,843 feet. It is a mile or so due south of the company's No. 1 Anderson. Jackson-Shankle's No. 2 Garcia on Block 22 of Survey 606, located 150 feet from the north and west lines has spudded in. No. 1 made a good oil well of about 150 bbls. Crown Central, which was shut down at 1,680 feet for a couple of weeks on the deep test it started in the older part of the field on Lot 56 of Survey 606, has resumed drilling and is down 1,960 feet. The company has made four new locations on that survey in various blocks and has the derrick up for No. 11, all of which will be drilled to the regular producing horizon at around 1,700 feet. J. K. Hughes has made location for his No. 10 Puig, in the Las Albercas grant, 155 feet from the north and west lines.

Carolina-Texas

Associated Oil Co. and Usher Carson's No. 1 "A" Webster in the northeast corner of the 20 acres in Survey 684 on which the discovery oil well of the field was brought in and the Associated Oil Co.'s No. 4 Webster were each being drilled in and bailed as this was being written. No. 1 "A" is a little over one location east of the discovery well and No. 4 is one location west of the discovery. Associated Oil Co.'s No. 3 Webster, 450 feet from the west line and 1,110 feet from the north line of Survey 684, has erected a derrick. Associated Oil Co. and Usher Carson No. "G" 3, southeast of the discovery well, has made a location. Associated Oil Co.'s No. 4 "D," a south offset to the Morgan Brothers well which is in the southeast corner of the northeast quarter of the northwest quarter of the northwest quarter of 684, is moving in tools and the Morgan Brothers well is rigged up and ready to spud in but delayed for lack of water. Associated's No. 5 Webster is a south offset to the discovery well, being 450 feet from the north line and 150 feet from the west line of the 20 acres, and it has also spudded in and made a little depth. No. "G" 3 Webster is 600 feet from the north line and 150 feet from the west line of the 20 acres. Associated has also made a location and built a derrick in the southwest corner of the same 20-acre tract 200 feet from the south line and 150 feet from the west line. It offsets Murhison & Fain's No. 1 Webster which is 150 feet from the south and east lines of the northwest quarter of Survey 584, which has spudded in.

The Texas Company's No. 1 Webster, a north offset to the discovery well of the field, is drilling below 2,100 feet and should be on the sand some time this week. It is being drilled by Al Buchanan, drilling contractor, who is using a gasoline driven rig. The Texas Company's No. 2 Webster which is an east offset to the Associated-Carson "G" 1 and The Texas Company's No. 3 which is a north offset to Associated-Carson "G" 1 have each spudded in and shut down for lack of water. They are each using steam rigs. Magnolia Petroleum Co.'s No. 1 Webster, a diagonal northwest offset to the discovery well, is waiting on water. Magnolia has completed a water line and is drilling some water wells a few miles off to the east of the field where shallow water is obtainable. It should have plenty of water available by this week. Houston Gulf Gas Co. (Moody & Seagraves), on Survey 688, 2 miles south and a little to the west, has rigged up and is drilling a water well. If it gets water it will supply water to the test in Survey 688 in the southwest quarter of the northwest quarter of the survey 150 feet from the south and west lines but will also supply water to a number of other tests closer to the discovery well in which interests associated with Houston Gulf Gas are interested. Morgan O'Hern & Seacord are rigged up waiting for water in No. 1 Webster, which is 300 feet south and 300 feet west of the discovery well. Morgan Brothers' No. 1 Benavides in Survey 679, located 150 feet east of the center of the west line is waiting for water. Houston Gulf Gas Co.'s No. 1 Barnsley on Block 15 of Survey 268, a half mile north of the discovery well, is drilling below 800 feet, being one of the few in the field that has water. Hazlitt-Simmons Corp.'s No. 1 Barnsley in Block 9 of Survey 268 has had sufficient water to get down 1,500 feet and the same company has the derrick up for a test in Block 11 of Survey 335, a mile to the northwest. Wolcott has the derrick up in Block 51 of Survey 680, three-quarters of a mile to the northeast but has not rigged up due to water shortage. Winch & Killam are coring at

(Continued on Page 116)

TWO SOUTHWEST TEXAS WILDCATS ABOUT TO TEST OUT EDWARDS LIME

By B. D. Stevenson

SAN ANTONIO, Tex., Aug. 9.—Several wildcat wells in southwest Texas are interesting but from the standpoint of immediate production unimportant as yet. The situation has not changed from a week ago. Two tests in the Balcones Fault Zone, one in Milam and one in Bastrop County are in the Georgetown and will probably drill in and test out the Edwards lime some time this week and every Edwards lime test is given considerable interest by geologists and operators wanting to learn something more about the Edwards even if the chances of production are not immediately apparent. It is becoming evident also that the territory up along the Balcones Fault zone, from San Antonio northeast through Bexar, Guadalupe, Caldwell Bastrop and Milam Counties, that was a center of activity a year ago of rather intensive drilling, is not to be deserted by the wildcatters. There is considerable reblocking of tracts both by big companies and individuals and it is probable that by fall several new tests will be announced.

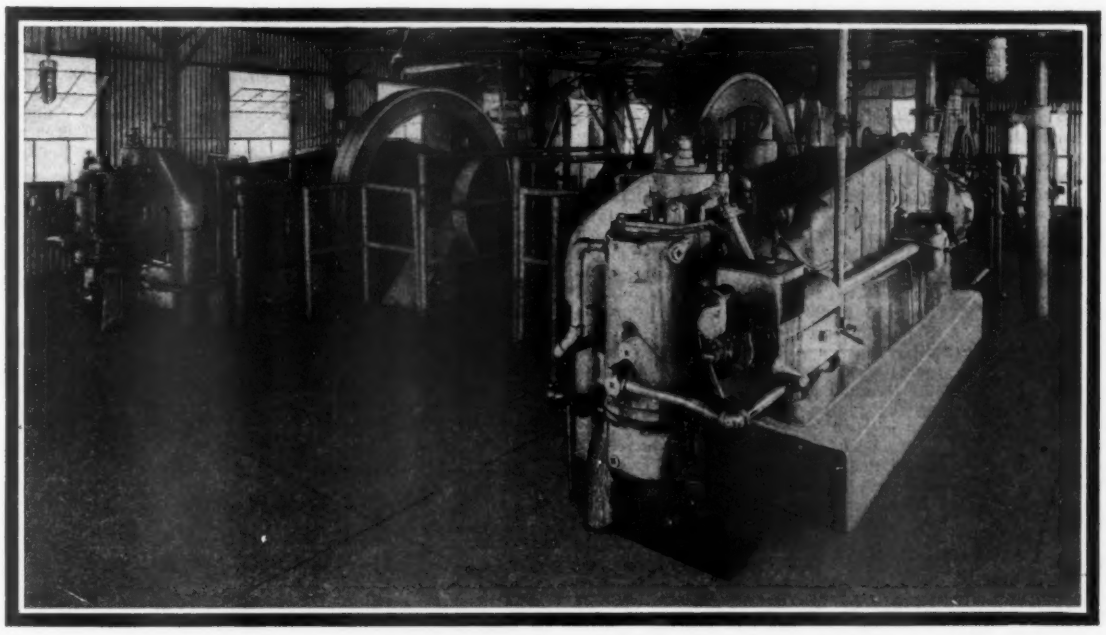
In that territory, the Fred Adams well on the Holder farm in southeastern Bastrop County, 8 miles northeast of the Lytton Springs Field in Caldwell County on the Red Rock Road, is drilling at 2,345 feet in the Georgetown. It seems to be running high and has a chance to make a well. However, other wells running high when drilled into the Edwards have failed to produce. Some time this week it should be into the Edwards lime. The J. W. Allen well, on the Brown farm west of Rockdale at 3,023 feet, is also in the Georgetown and should top the Edwards lime at about the same time as the Fred Adams well in Bastrop County. The two wells are 60 miles or so apart but are in the Balcones Fault zone where the geological conditions are much the same. The Allen well has been making considerable gas for some time. The Texas Company is drilling at approximately 600 feet in Williamson County, west of the J. W. Allen test, and Alexander & Lyles are moving in machinery for a test in Milam County, northeast of J. W. Allen, and on the same line of faulting, the location being 7 miles west of Cameron.

In Guadalupe County

In Guadalupe County, J. M. Davis, at Staples in the northern part of the county, drilling a test contracted to go 100 feet into the Edwards, has topped the Austin chalk at 1,208 feet which it is estimated is over 600 feet low compared with a well to the north of it. The well is not looking so good at the top of the chalk though if the chalk and other formations should thin out its looks could improve immensely. Davis' No. 2 Rosenbrock, in western Guadalupe, a little south of New Berlin and on a Payne & Bond lease, spudded in last Wednesday for a test to around 1,300 feet at which depth it is expecting to encounter Serpentine found by Payne & Bond in their No. 1 Rosenbrock with 100 feet of the formation carrying oil but which was not tested in No. 1. The showing in No. 1 looked so much like a well that this test is due to attract considerable interest. It will not be long in drilling.

In Caldwell County, south of Dale, Reiter-Foster Oil Corp. has abandoned

(Continued on Page 116)



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Spindletop, Both Grades, Cut 35 Cents

Production Touched 82,000 Bbls. Friday, 73,000 Monday. May Reach 100,000. Some Wells 75 Per Cent Salt Water

By P. L. McGreal
Staff Correspondent, Gulf Coast Fields

HOUSTON, Tex., Aug. 9.—The Gulf Co. has cut Spindletop, both grades, 35 cents. Grade A is now $1.25; Grade B, $1.15. Other lines have not reduced yet. The cut applies to Spindletop only. Some deep sand wells are showing a cut as high as 75 per cent salt water during past 48 hours. The Gulf Co. completed No. 1 Oakwood, flowing 3,600 bbls. The daily average today in round figures, 73,000 bbls.

Gross production in the Gulf Coast continues to mount, the total for the week ending August 7 being 173,745 bbls., an increase of 22,970 bbls. over the previous week. The gross for the deep sand section of the Spindletop Pool for the same period is 78,500 bbls., or 23,500 bbls. more than last week. The output there ran over 82,000 bbls. for Friday.

Operators in the deep sand area now believe the peak may run over 100,000 bbls., basing their conclusions on the way late completions are holding up and reported showing in a test drilling 1,000 feet south of the present producing limits. The deep sand belt is about 3,000 feet south of the old original cap rock section, swinging from the southeast around to the southwest and west. The developed belt is about 800 feet wide. If the report concerning the test 1,000 feet south of the present productive belt finding a sand showing oil is true, it means that much additional productive territory to be opened and add its flush output to the total. There is considerable mystery, however, about this test and the report cannot be verified as this is written.

Seven wells were completed there during the week, yielding a total of 29,500 bbls. new production. The Yount-Lee Oil Co.'s No. 2 fee started the week flowing 2,500 bbls. through a choke. Gulf Production Co.'s No. 3 Weed started with 4,000 bbls. at 2,800 feet and increased to 6,000 bbls. Same company's No. 2 Roach is flowing 6,000 bbls. at 2,900 feet and its No. 2 Quinn is flowing 4,000 bbls. The Yount-Lee Oil Co.'s No. 6 Gladys is flowing 7,000 bbls. The Rio Bravo Oil Co.'s No. 5 Southern Pacific right of way is making 3,000 bbls. through ⅝-inch choke. Late in the week the Atlantic Oil Producing Co.'s No. 2 McLean came in flowing 3,000 bbls. at 2,900 feet.

There are now 26 wells in the deep sand section. The Sun Co.'s and Paggi Brothers' No. 1 Gordon are "dead" and are not included in the total.

The following is the record to date:

Company—	No. Wells	Prod.
Yount-Lee Oil	15	44,050
Gulf Production Co.	6	14,355
Rio Bravo Oil Co.	3	13,750
Sun Oil Co.	1	7,840
Atlantic Oil Producing	1	3,000
Total	26	82,995

The above is the peak for the week, but the average for the entire seven days is somewhat less.

Extending Pipeline

The Humble Pipe Line Co. is assembling material for an extension of its 8-inch line from Hull to Spindletop, a distance of 35 miles, and will probably extend it on east, crossing the Neches River and connecting with its Orange line from the Orange Pool to Neches Terminal on deep water south of Orange. The Texas Company is laying 3 miles of 4-inch line from the pool to connect with its tankage on the Port Arthur line. The Sun Oil Co. is handling the Yount-Lee Oil Co.'s production, or a part of it is to its Sabine terminals in addition to its own production. The Magnolia Pipe Line Co. is running the Rio Bravo Oil Co.'s production into storage at Gladys and the Gulf Pipe Line Co. is handling the output of the Gulf Production Co.

The Yount-Lee Oil Co. has ordered 20 steel 55,000-bbl. tanks from the Petroleum Iron Works and will build a tank farm on 1,800 acres between the pool and the Neches River. The Vacuum Oil Co. and other buyers of Coastal crude are reported to be offering a premium of from 15 to 20 cents per barrel for the Spindletop product. Practically all the oil grades as A, the lines paying $1.60 per barrel for it. A deep water loading terminal on the Neches River is one of the projects the Yount-Lee Oil Co. has in view if the production holds up.

The pool has established another record, being the first of any of the districts to maintain a daily average production of more than 50,000 bbls. for more than one week.

Beaumont is experiencing a mild boom these days. The hotels are crowded and it is difficult to secure a room. Most of the visitors are sightseers since there is no chance to secure any close-in acreage. There is a marked contrast between conditions in Beaumont and the pool during the original boom 25 years ago and today. Then Beaumont was a saw mill town, bathed in mud with but the most meager accommodations. The 3-mile trip to the field in hacks was a hardship. The sawmill town has given place to a modern, growing city and the trip to Spindletop involves no difficulties, otherwise than the danger involved in driving over a badly crowded highway.

Among the drillers and contractors now "making hole" in the deep sand section are a number who drilled there in the original cap rock area 25 years ago. An outstanding figure is M. W. Mitchell, known all over the southwestern fields as "Mike," who is drilling wells on contract for the Gulf company. Mitchell was drilling in the old Corsicana Field when Spindletop apened and was among the early arrivals with a small rotary outfit. The contract price is now $3.50 per foot.

Drilling Wells

The Gulf Production Co.'s No. 44 Weed is at 1,435 feet with a derrick for No. 5. No. 1 Oakwood is around 2,655 feet and No. 2 around 2,090 feet, with a derrick up for No. 3. No. 3 Mann is at 1,010 feet. No. 4 is a derrick. No. 4 Roche is around 2,000 feet. No. 1 Jack, south of production, is around 3,100 feet.

The Yount-Lee Oil Co.'s No. 7 Gladys is at 1,810 feet with a derrick for No. 8. No. 8 McFadden is at 980 feet, No. 9 is rigging and No. 10 is a location. No. 3 fee is at 2,875 feet. Derricks are up for Nos. 4 and 5, as well as for Nos. 2 Davis and 2 Trembly.

The Atlantic Oil Producing Co.'s No. 1 McLean is at 2,809 feet. Nos. 3 and 4 are rigging. The Sun Oil Co.'s No. 3 McLean is at 3,020 feet. The Rio Bravo Oil Co.'s No. 4 Southern Pacific is rigged. No. 6 is rigging with a location for No. 7. Duetser Oil Co.'s No. 1 Scharbauer is at 2,765 feet. The Seven Oil Co.'s No. 1 Trembly is below 1,550 feet. K. Kishi's No. 1 Ewing is drilling at 2,310 feet. Turnbow and others' No. 1 Banks is at 544 feet with a derrick for No. 1 Weed. Paggi Brothers have a derrick for No. 2 Gordon.

The usual rumors of deals are current. One of these is to the effect that the Pure Oil Co. offered the Yount-Lee Co. $30,000,000 for its holdings at Spindletop. Frank Yount, president of the company, confirmed the report that an offer had been received, but declined to state how much or what company made it.

Estimated Gross Production

Other increases in gross production during the week, aside from Spindletop, are: Blue Ridge, 125 bbls.; Goose Creek, 475 bbls.; Humble, 1,000 bbls.; Pierce Junction, 800 bbls.; Sour Lake, 1,035 bbls.; Boling decreased 160 bbls.; Big Creek, 325 bbls.; Hull, 250 bbls.; Jennings, 140 bbls.; Lockport, 500 bbls.; Nash, 680 bbls.; Orange, 265 bbls.; South Liberty, 840 bbls.; Vinton, 385 bbls., and West Columbia, 1,050 bbls.

The daily average for each pool is as follows:

Pool—	Daily Average
Boling	2,459
Batson	1,525
Big Creek	3,275
Blue Ridge	1,925
Barber Hill	500
Dayton	80
Damon Mound	810
Edgerly (La.)	775
Goose Creek	11,650
Humble	5,920
Hull	17,525
High Island	710
Jennings (La.)	1,160
Lockport (La.)	5,860
Markham	75
Nash	720
Orange	9,010
Orchard	250
Pierce Junction	4,000
"Piedras Pintas	90
Spindletop	78,500
Saratoga	1,560
Sour Lake	6,175
South Liberty	1,860
Vinton (La.)	6,815
West Columbia	8,900
Welsh-Anse La Bute (La.)	75
Miscellaneous	110
Total	173,745

Southwest Fields

An increase of 1,425 bbls. is noted in the daily average for the southwest fields during the week, due to completion in the Mirando district. The estimate for each field is as follows:

Field—	Gross Bbls.
Luling	22,400
Mirando	16,050
Somerset	2,060
Callham	115
Rockdale-Minerva	975
Lockhart (Lytton Springs)	4,330
Total	45,930
Grand total for week	219,775
Grand total last week	195,280
Net increase	24,395

The grand total is the largest in the history of the Coast or the southwest fields, thereby establishing a record. In fact this has been a week of records, but minus the excitement that usually accompanies record breaking.

Other Completions

A total of 24 wells were completed in the pools during the week, of which 5 were dry and 4 salt water holes. The new production aggregates 32,100 bbls. from the 20 producers.

The following table shows the results of the week's operations at a glance:

District—	Comp.	Prod.	Dry	Sw.	B'l'g.
Boling	1	0	1	0	1
Edgerly	1	100	0	0	0
Goose Creek	2	25	0	1	0
Hull	3	300	1	1	0
High Island	1	75	0	0	0
Jennings	1	75	0	0	0
Spindletop	7	29,500	0	0	0
Sour Lake	1	1,520	0	0	0
Vinton	5	505	3	0	0
Miscellaneous	2	0	0	2	0
Total	24	32,100	5	4	1
Last week	32	45,780	10	1	3

The Humphrey Corp. got its second well in the deep sand section on the southwest side of the Sour Lake Pool in No. 2-A Bashara, flowing 1,520 bbls. at 3,925 feet, 35.5 gravity. The well is making no water.

At Goose Creek the Gulf Coast Oil Co.'s No. 9 Galliard, a workover, is pumping 25 bbls. at 2,650 feet. The Humble Oil

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MALJAMAR MAKING 300 BARRELS; SKELLY WELL PROBABLE PRODUCER

By Special Correspondent

ARTESIA, N. Mex., Aug. 6.—With the Maljamar Oil & Gas Corp.'s No. 1 Baish making close to 300 bbls. daily, with the bridge still 45 feet off the bottom, oil operators in this State are satisfied the well will make a good producer and have turned their attention to the Skelly Oil Co.'s No. 1 test on the Beulah Lynch Permit, in the NE. Section 22-17-31. Running 250 feet higher structurally, than the Maljamar, the two logs are checking closely and with several good showings, the Skelly, it is believed has an excellent chance of making a producer and extending the Maljamar Pool 5 miles to the west. A gas sand from 1,990-2,020 feet was good for 500,000 feet and sandy lime at 2,365 feet and 2,475 feet, carried good showings of both oil and gas. The 12½-inch casing in all probability will be cemented as a large volume of gas is looked for from the red sand which, according to correlations made by geologists should be picked up around 2,780 feet. This sand was encountered in the Maljamar test at 3,115 feet and was good for 10,000,000 feet of gas.

With the water exhausted, the Wooley-Jones last Sunday put 40 bbls. of oil into the tank. Further production was cut off when the pumping equipment broke down. It is understood this test will be drilled deeper.

Another large acreage deal was closed during the week by Henderson-Dexter-Blair, who purchased 14,000 acres in Lea County. Considerable trading has also been carried on by other independent companies.

Artesia Field

In the Artesia Field, the Twin Lakes Oil Co. is completing a good producer in its No. 8, in Section 28-18-28, which was shot with 100 quarts from 2,422-47 feet. Over 1,500 feet of oil was standing in the 8-inch hole before the shot.

Drilling has been resumed on the Merriweather No. 1 Goodale, in Section 19-18-29, this well being taken over by Maloney and others for completion.

Efforts are being made to case off the water in the well on the Vandagriff Permit in Section 5-17-28, pipe being run with a packer.

Nine miles south of the New Mexico line, the Pure Oil Co. has considerable gas in its No. 1, wildcat, in Section 12, Block 63, Township 2, Culberson County, Texas. Thirteen hundred feet of black lime, which is believed to be Pennsylvanian and similar to the lime of the Ranger district, is being shot in the hope of making the well a producer. The first shot of 180 quarts was run last Saturday from 4,680-4,720 feet. The well was again shot yesterday with 260 quarts from 4,550-4,650 feet. Another shot will be run higher up during the coming week. This test is located on a block of 62,000 acres and has cost approximately $150,000 to drill.

Eddy County

Colorado Drilling Co.'s No. 1 Irvin, Section 8-16-27, drilling around tools at

(Continued on Page 119)

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65 Broadway, New York

Distress Crude Appears in Oklahoma

Of 500,000 Bbls. Offered For Sale, Half is Disposed of. Seminole Pool May Differ from Others in that Area

By J. L. Dwyer
Staff Correspondent, Oklahoma Fields

A significant and somewhat surprising feature of the crude petroleum situation in Oklahoma, in view of the quantity of crude being withdrawn from storage in this State, occurred during the past week when 500,000 bbls. of crude was offered for sale. One company, which has been mentioned prominently in connection with premium paying is said to have disposed of 250,000 bbls. while other companies who offered an aggregate of 250,000 bbls. in addition, were unable to find buyers.

In the fields, Seminole County is the most interesting spot in Oklahoma. The region of the Seminole Pool was made increasingly interesting by the completion of another well in the north end of the pool. The Mid-Continent Petroleum Corp.'s No. 1 Grayson, NW cor. SW SW, Section 34-10-6, made 900 bbls. from sand topped with 4,000,000 feet of gas at 4,085 feet. The pay was found at 4,128-42 feet. This well is an east offset to the recently completed Prairie Oil & Gas Co.'s No. 1 Kincaid. The new well is a diagonal offset to the wildcat well of F. J. Searight and others, which is now flowing 80 bbls. daily. It seems to indicate that good production will be found to the southeast and south of the Searight well, which at this time seems definitely placed as an edge well. With the presence of production 2 miles south in the Eye Tee Eye Pool, in Section 24-9-6, the intervening region looks very promising.

Well Increases Flow

The Independent Oil & Gas Co. and R. F. Garland's big well is increasing slightly with no deeper drilling. For the 24 hours ending Monday morning of this week, it produced 5,624 bbls. This is about 100 bbls. better than it did for the preceding 24 hours. In spite of repeated reports that the Garland interest has been sold, it seems that it is still held by Mr. Garland and all negotiations for its sale have been abandoned.

The diagonal southwest-northeast line of production which now appears on the map running from the Searight-Prairie-Mid-Continent wells in Township 10-6, to the Independent-Garland well in Section 26-9-6, is in itself significant. It is absolutely contrary to the conformation of the pools which have been discovered in this territory. With the exception of the Papoose Pool, which runs almost east and west, the general line of production in the pools of this region is northwest-southeast. The Wewoka Deep Sand Pool is not included in this statement for the reason that it has not been fully delimited. Considering the outlines of other pools, the future of the Seminole region is interesting, and it may run in a direction which varies from pools previously encountered.

The table accompanying this story gives the detailed production by sands of the Garber Field in Garfield County. This spot, which was the center of interest last summer and fall, is now maintaining its production chiefly by the use of air-gas flowing systems. The Tonkawa sand production is now 10,000 bbls. and is the most important horizon in the field at present. It has good prospects of extension, and should at least maintain if not increase the production of the field for some time.

In Pottawatomie County, a well which is watched very closely is the Independent Oil & Gas Co. and Darby Petroleum Co.'s test in Section 15-7-4. The casing in this well is being underreamed to 3,-612 feet where it will be landed in an attempt to shut off any water which may be coming from above. There is some water in the hole and the origin of it has not been fully determined. Before the intrusion of the water, the well was making 60 bbls. daily. The existence of the Hunton lime in this region is very important, and this formation is coming into prominence.

Logan County Showing

In Logan County, a wildcat well which had a good showing of gas in a rotary hole at a depth of 1,300 feet is Joe Bailey and others' No. 1, NW cor. NE, Section 5-17-1w. Although very limited in quantity, the discovery of this shallow gas will reveal much information which will be valuable in determining the formations of the area.

Another significant feature of Logan County is found in the well of T. B. Slick, SW cor. SE, Section 28-17-1, which has standardized at 2,400 feet in lime. This well passed through the red bed formation at a remarkably shallow depth and on this account is being given much attention by the geologists.

The Texas Pacific Coal & Oil Co.'s No. 2 Moore, in Section 28-18-4w, Logan County, is drilling deeper. This well had 5,000,000 feet of gas in sand at 3,880-3,904 feet, and was shut down at 3,909 feet in red rock. For some time it was thought that the well would be plugged.

In Creek County, a few miles north of the Kellyville Pool, which has been productive for J. H. Wright and the Pioneer Petroleum Co., the Independent Oil & Gas Co. and Nowata Oil & Refining Co. have a good well in No. 1 Pemberton, NW cor. NE NW, Section 8-17-10. It is making 275 bbls. on the swab from a member of the Dutcher sand. The bottom of the hole is 3,980 feet. The well will be drilled to a greater depth and has probably opened a new Dutcher Pool.

Ingalls Pool, Payne County

Company—	Wells	Prod.
Prairie Oil & Gas Co.	8	2,737
Roxana Petroleum Corp.	2	1,048
Magnolia Petroleum Co.	1	1
Total	11	3,786

Davenport

Magnolia Petroleum Co.	64	2,053
Gypsy Oil Co.	24	1,185
Phillips Petroleum Co.	7	440
Pure Oil Co.	8	326
Prairie Oil & Gas Co.	24	710
Selby-Texas Co.	12	357
Carter Oil Co.	8	184
Skelly Oil Co.	8	216
The Texas Co.	26	1,021
Twin State Oil Co.	9	251
Sinclair Oil & Gas Co.	1	37
Amerada Petroleum Corp.	11	520
Shaffer Oil & Ref. Co.	5	107
Total	207	7,407

Garber Field

The various sands in the Garber Field produced as follows for the week ending August 6:

Wilcox Sand

Company and Farm—	Wells	Oil	Water
Carter Oil Co., Dively	2	92	90
Mid-Continent Pet. Co. and Marland Oil Co., School Land	8	377	304
Marland Oil Co., Wishart	2	56	56
D. W. Franchot Co., Lynds	1	32	30
Healdton Oil & Gas Co., Belveal	1	15	15
Prairie Oil & Gas Co., Wishart	2	0	0
Roxana Pet. Corp., Schroeder	7	880	852
Roxana Pet. Corp., Wolfe	1	169	170
Sinclair Oil & Gas Co., Belveal	4	219	142
Sinclair Oil & Gas Co., W. Kisner	5	533	492
Sinclair Oil & Gas Co., Hartley	5	1,686	1,731
Sinclair Oil & Gas Co., N. Walker	12	1,246	1,063
Sinclair Oil & Gas Co., Denker	2	82	71
Total	52	5,387	5,016

Oswego Lime

Sinclair Oil & Gas Co., Shaffer	1	26	15

Layton Sand

Roxana Pet. Corp., Schroeder	8	4,514	4,063
Sinclair Oil & Gas Co., N. Walker	6	3,398	3,651
Sinclair Oil & Gas Co., Hartley	5	1,869	2,544
Marland Oil Co and Mid-Continent Pet. Co., School Land	3	908	876
Sinclair Oil & Gas Co., W. Kisner	1	144	335
Total	23	10,833	11,469

Tonkawa Sand

Roxana Pet. Corp., Schroeder	17	5,161	4,593
Sinclair Oil & Gas Co., N. Walker	8	2,167	1,675
Sinclair Oil & Gas Co., S. Walker	3	729	336
Sinclair Oil & Gas Co., Hartley	5	281	196
Marland Oil Co. and Mid-Continent Pet. Co., School Land	6	1,970	1,638
Totals	39	10,308	8,438

Hoover Sands

Roxana Pet. Corp., Schroeder	5	137	140
Sinclair Oil & Gas Co., Hartley	7	2,473	2,550
Sinclair Oil & Gas Co., N. Walker	7	766	1,112
Marland Oil Co. and Mid-Continent Pet. Co., School Land	2	90	69
Total	21	3,466	3,871

Production by Companies

Company—	Wells	Oils	Water
Carter Oil Co.	2	92	90
Marland-Mid-Continent	10	3,345	2,887
Mid-Continent Pet. Corp.	2	56	56
Franchot Co.	1	32	30
Healdton Oil & Gas Co.	1	15	15
Prairie Oil & Gas Co.	2	0	0
Roxana Pet. Corp.	38	10,861	9,818
Sinclair Oil & Gas Co.	71	15,619	15,913
Total	136	30,020	28,809

Burbank Field

Company—	Wells	Prod.
Carter	283	5,400
Comar	7	99
Mid-Continent Pet. Co.	106	1,025
Devonian Oil Co.	16	106
Gypsy Oil Co.	193	2,317
Kewanee Oil Co.	27	1,035
Laurel Oil & Gas Co.	16	144
Lewis Oil Co.	22	1,499
Lorraine Oil Co.	15	81
Midland Oil Co.	37	500
Mid-Kansas Oil Co.	45	1,022
Peters-Oliphant	4	643
Phillips Petroleum Co.	223	16,197
Delmar Oil Co.	16	678
Phillips-Skelly	180	2,085
Prairie Oil & Gas	127	3,900
Producers & Refiners Co.	29	234
Roxana Pet. Corp.	54	505
Seamens	1	6
Simons-Moore	29	177
Sinclair Oil & Gas	144	1,224
Skelly Oil Co.	32	1,247
Tidal-Osage Co.	42	432
The Texas Co.	16	207
Twin State Oil Co.	24	292
Total	1,689	41,115

South Burbank

Phillips Pet. Co.	3	398
Prairie Oil & Gas	8	1,014
Sinclair Oil & Gas	1	8
Midland Oil Co.	2	30
Total	14	1,450

Kay County Extension

George S. Boles	3	164
Carter Oil Co.	11	799
Comar Oil Co.	17	779
Mid-Continent Pet. Co.	16	715
Gypsy Oil Co.	18	290
Laurel Oil Co.	5	222
Mid-Kansas Oil Co.	10	772
Phillips Pet. Co.	32	2,023
Prairie Oil & Gas Co.	4	93
Pure Oil Co.	4	208
Roxana Pet. Corp.	8	266
Dye-Tomlinson	8	206
Skelly-Phillips	20	251
Sinclair Oil & Gas	5	188
The Texas Co.	16	126
Twin State Oil Co.	15	609
Total	192	7,711
Grand total	1,895	50,276

Okfuskee County

Independent Oil & Gas Co. has built the rig for No. 1 Cinds, SE cor. NW NE, Section 12-12-10. C. L. McMahon has a rig on the ground for No. 1 Morgan, NW cor. SE SE, Section 3-12-11. Continental Oil Co. has spudded No. 10, SE cor. SW SE, Section 33-11-8. Sinclair Oil & Gas Co. has a rig up for No. 10 Pierce, C SE SE, Section 33-11-8. Mid-Kansas Oil & Gas Co.'s No. 1, NE cor. NW, Section 35-11-9, had sand at 3,104-33 feet with 19,000,000 feet of gas. Kingwood Oil Co.'s No. 1, NW cor. SE NW, Section 21-10-9, had 71,-000,000 feet of gas in sand at 3,307-37 feet. Champlin Refining Co.'s No. 2, CEL SW SW, Section 14-11-11, is spudded. No. 4, CNL SE SE, Section

NIGGER CREEK PROSPECTS DIMMED BY APPARENT FAILURE OF TEST

By Special Correspondent

MEXIA, Tex., Aug. 9.—The past week has dealt a severe blow to the prospects of the Nigger Creek region of Limestone County. This area has been considered a potential fault line pool such as Mexia, Wortham and Powell.

The inconsistent performance of wells of this territory has dimmed the prospects of the field and has lessened the interest, and when one of the wells seemed to be a failure, a shutdown of many tests was the result.

The well which appears to be dry is the Pure Oil Co.'s No. 1 O'Dell, 2,400 feet northeast of the Transcontinental Oil Co.'s No. 1 Rosson. The Pure Oil Co. well missed the chalk formation which is usually encountered around 2,-500 feet. The regular sand was found 2,866-82 feet, and is barren.

When the Pure Oil Co. well found the sand dry, it resulted in all of the drilling wells between it and the Transcontinental Oil Co.'s No. 1 Rosson being shut down. Last week a total of 67 rigs, locations and drilling wells were in this section, and as a result of the Pure Oil Co. well, 13 operations were shut down.

The wells to the west and south of the Transcontinental's No. 1 Rosson are not affected by the Pure Oil Co. well, and they are drilling ahead. There are 54 active operations in the field, and until they are completed, the future of the region is unknown, although it looks very discouraging.

Another disappointing aspect of the Nigger Creek Field is that the Transcontinental Oil Co.'s No. 1 Cochrum, which stopped flowing 10 days ago failed to respond to efforts to revive the flow. Standard tools were rigged up, the well was agitated, and every effort made to start the flow, but the efforts were futile, and at present the tubing is being run and the well is being prepared for the pump.

The Transcontinental Oil Co.'s No. 1 Rosson, the discovery well of the field is decreasing in production, and the amount of water and b.s. found in the production is increasing. On Monday of this week, the well produced 1,031 bbls., which was 12 per cent b.s., and 4 per cent water.

With a dry hole 3,509 feet deep to the west of it, an apparently dry hole northeast of it, and another dry hole southeast of it, the Transcontinental Oil Co.'s No. 1 Rosson, is the only producer in the field, and if the field is to assume any proportions, it must be confined to a strip much narrower than the ordinary fault line pool which averages four locations wide.

With the pool in the present state of development, there is ample room for varying opinions among the oil men as to its future, but the prospects are far from bright.

The Godley Oil Co.'s No. 1, southwest of the No. 1 Rosson well is on top of the sand at 2,829 feet, and will be the next well completed.

The 12 Points that meet the Driller's 7 Demands

1 *Rollers and bushings of drawn seamless tubing are accurately cut to size in special automatic cut-off machines.*

Each seamless roller will fit closely to the bushing and sidebars. The bushings in turn will fit snugly in the sidebars, and close around the pins. No play will develop there.

2 *Sidebar holes are broached and offset in one operation in especially made dies, making smooth seats for pins and bushings, accurately placed.*

The pins and bushings are driven into the absolutely parallel broached holes, tightly, but without shearing. The pins will hold and will not cut out the sidebars.

3 *The right amount of metal at each point gives proper strength without excess weight.*

Sidebars are blanked and punched at one operation from alloy steel, making them accurate in every dimension.

4 *Pins and bushings are ground smooth and to exact dimensions by centerless grinding.*

Smoother bearing surfaces will wear longer, and the links can be assembled with closer tolerance, making the chain more accurate.

5 *Accurately made parts are assembled by the slow, smooth stroke of pressure recording machinery, giving every link the proper force fit.*

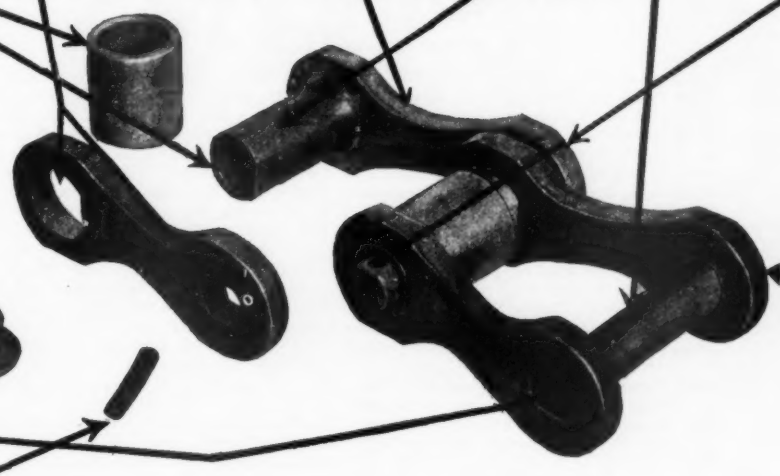
Every link is made a unit, the sidebars will not back off the bushings, the chain will not rattle apart.

6 *On riveted chain, the pins are riveted in a specially designed Electric Riveter.*

The alloy steel pins can be riveted securely only by electrically generated heat.

7 *Pins are smooth forged and finished.*

The pins are smooth, the head is true to size and free from destructive fins or projections — because they are accurate, they have the proper fit at every point of contact.



9 *Automatic Controlled Heat Treating Furnaces and Quenching Equipment make possible the correct heat treating of every part.*

Sidebars, pins, rollers and bushings are heat treated to develop the desired strength, toughness and wearing qualities.

10 *In the laboratory, hundreds of tests have proven the metal in Rex Chabelco —*

The steel in every part of this chain has been scientifically selected for its special fitness.

11 *The 100,000-pound Dynamometer Testing Bench tests every chain before it leaves the factory.*

Every chain must be right to pass the inspection tests.

12 *"Go" and "no go" gauges check the work of precision manufacturing at every point.*

The result is the closer, tighter all-'round fit and close accuracy that means longer life to the chain in service.

8 *The New Rex Pin Lock that overcomes the disadvantages of riveted pins or cotters —*

This pin lock makes it easy to assemble the chain in the field, to take out or add links. As simple as the cotter, it is positive and sure.

Bigger bores, bigger engines, faster work and deeper wells have constantly demanded better and better chain for oil well drilling.

Four years ago the Chain Belt Company saw that the driller's demands would eventually exceed the capabilities of Oil Well Chain as built at that date. It was then that work was started on deep well Chabelco. Since that time 4 years and a quarter of a million dollars have been spent to build the 12 points that meet the driller's 7 demands into Rex Deep Well Chabelco.

You see the twelve points above, you know the seven great demands:

1. A Chain that would have long life.
2. A Chain that would not suddenly give way while the tools were in the hole.
3. A Chain that would not stretch.
4. A Chain that would not rattle apart.
5. A Chain in which the sidebars would not back off the bushings.
6. A Chain that was flexible and smooth-riding.
7. A Chain that would be easy of assembly in the field.

The 12 points of Rex Deep Well Chabelco meet the 7 demands in every way. Look over a link and you will see why. Rex Deep Well Chabelco 1030 D. W. 3 and 1240 D. W. 4 both fit standard sprockets. Both are stocked in the Oil Fields.

Send for this folder

Our new folder "Deep Well Chabelco" — deals with the 12 points and the 7 demands — will be sent free to anyone interested. Write for it.

CHAIN BELT COMPANY, 719 Park Street, Milwaukee, Wis.

1000 Keystone Building, Houston, Texas — 210 So. San Pedro Street, Los Angeles, Calif.

GET GENUINE 1030 D. W. 3 and 1240 D. W. 4

REX Deep Well CHABELCO

15-11-11, is also spudded. J. J. Deaner has a rig up for No. 3 Likowski, NW cor. NE SW, Section 23-11-11. Amerada Petroleum Co. and others have abandoned the location for No. 1, SW cor. SW, Section 18-10-11.

Magnolia Petroleum Co. has a rig on the ground for No. 1 Harjo, SE cor. SW NE, Section 16-13-8. Darby Petroleum Co. and others have a rig up for No. 1, SE cor. NW SE, Section 17-13-10. Josey Oil Co. is drilling at 800 feet in No. 16, C NW SW, Section 33-12-11.

Muskogee County

C. M. Bradley has spudded No. 1 Wade, SW cor. NE, Section 2-14-19. No. 2 Crittendon, CNL NW SW, Section 5-14-19, is spudded. C. T. Smith has a machine on the ground for No. 1 Walker, SE cor. NW NE, Section 23-14-15.

Pawnee County

In the Keystone district, B. E. Kennedy has spudded No. 1 Black, NW cor. SW NW, Section 13-20-9. Magnolia Petroleum Co. has built the rig for No. 1 Tucker, NE cor. SE, Section 10-22-3.

Stacey & Vaughn, NE cor. NW SW, Section 6-20-5, is spudded. Josey Oil Co. has the timbers on the ground for No. 6 Embry, SW cor. SE SE, Section 21-20-6. Fern Oil Co.'s No. 3, NE cor. SW NW, Section 22-20-6, had sand at 3,070-72 feet with a showing for a 60-bbl. well. The pipe is being pulled and the well is not completed. Adamson and others have a rig up for No. 8 Signa, SE cor. SW SW, Section 32-21-8. Mid-Continent Petroleum Corp.'s No. 21, NW cor. NE SW, Section 16-20-7, had sand at 2,573-2,592 feet and made 60 bbls. after a shot of 20 quarts.

Osage County

Marland Oil Co.'s No. 1, C NE NW, Section 11-25-3, is dry and abandoned at 4,070 feet.

Kay County

Vernon Oil & Gas Co. is rigging up to drill an old well deeper in No. 2 Burkhalter, SW cor. SE, Section 17-29-1. Old total depth is 1,975 feet.

Comar Oil Co. has built the rig for No. 2 Day, SE cor. NE SE, Section 20-29-1w. The Texas Company's No. 3, SE cor. NE, Section 20-29-1w, had sand at 2,375-2,400 feet and made 927 bbls. naturally. The location for No. 4, NE cor. SE NE, Section 20-29-1w, has been abandoned. The rig is being built for No. 4 Day, CSL SE SE NE, Section 20-29-1w. Comar Oil Co. has rigged up No. 1 Bixley, NW cor. SE NW, Section 28-29-1w. The rig is up for No. 1 Judd, NE cor. NE, Section 28-29-1w. Prairie Oil & Gas Co. has spudded No. 5 Jones, SW cor. NW NW, Section 10-27-1w. Harold Petroleum Co. has built the rig for No. 5 Case, SW cor. NW SW, Section 4-27-1w. Blackwell Oil & Gas Co. has spudded No. 4, SE cor. NE SE, Section 5-27-1w. No. 2 Moore, SE cor. NE SW, Section 8-27-1w, is drilling at 400 feet. No. 8, NE cor. NE, Section 9-27-1w, had sand at 3,418-24 feet and made 123 bbls. on the swab after a shot of 10 quarts.

Hughes County

Independent Oil & Gas Co. and the Foster Investment Co.'s No. 3, NW cor. SW SE, Section 26-9-6, had sand at 3,320 feet with 25,000,000 feet of gas. Producers & Refiners Corp.'s No. 1, NW cor. NE, Section 28-9-10, had sand at 3,117-30 feet with 25,000,000 feet of gas and 120 bbls. of oil.

Noble Oil & Gas Co. has a rig on the ground for No. 1 Harjo, SE cor. NW, Section 13-8-9. Papoose Oil Co.'s No. 1, SE cor. NE SW, Section 29-8-9, is dry and abandoned at 4,504 feet. Robinson & Letcher have a dry hole at 1,372 feet where the rig is skidded in No. 1, SE cor. NW, Section 17-8-10. A twin well is being rigged up. In the Wewoka deep pool, the Prairie Oil & Gas Co. has a failure in No. 3, NW cor. NW, Section 4-7-8, which is abandoned at 4,174 feet.

Seminole County

Magnolia Petroleum Co. has a rig on the ground for No. 1 Bruner, SE cor. NW, Section 2-9-5. The rig is being skidded in No. 1, SW cor. NW SE, Section 10-9-5, at a depth of 3,460 feet. No. 1-A Lena, SW cor. NW SE, Section 10-9-5, is rigging up. No. 1, NE cor. NW SE, Section 10-9-5, had sand at 3,563-89 feet and was shot with 10 and with 20 quarts and made 156 bbls. The Texas Company has a rig on the ground for No. 1 Johnson, NW cor. NE SE, Section 10-9-5. The Carter Oil Co. is building a rig for No. 1 Deer, NW cor. NW Section 3-9-6. No. 1 Davis, NE cor. NE, Section 4-9-6, is rigging up. The rig is on the ground for No. 1 Grisso, SE cor. SW, Section 23-9-6. The rig is up for No. 2 Carter, SE cor. SW SW, Section 24-9-6. Indian Territory Illuminating Oil Co.'s No. 8, SW cor. NW SE, Section 24-9-6, made 2,044 bbls. from sand at 3,976-4,010 feet. No. 8, SE cor. SW NE, Section 24-9-6, had sand at 3,993-4,000 feet and made 13 bbls. Mid-Continent Petroleum Co.'s No. 2, NW cor. SE SW, Section 24-9-6, is drilling at 800 feet. The rig is on the ground for No. 3 Tayche, SW cor. SE SW, Section 24-9-6. Tidal-Osage Oil Co.'s No. 2, SE cor. NE SW, Section 24-9-6, had sand at 3,966-4,003 feet and made 844 bbls. Prairie Oil & Gas Co.'s No. 1 Cross, NE cor. NW NW, Section 25-9-6, is a rig. Tidal-Osage Oil Co. has built the rig for No. 2 Tayche, NW cor. NE NW, Section 25-9-6. Independent Oil & Gas Co. and others' No. 3, NE cor. SW NE, Section 26-9-6, is drilling at 350 feet. No. 4, NW cor. SW NE, Section 26-9-6, is drilling at 250 feet. Independent Oil & Gas Co. and Interocean Oil Co.'s No. 2 Jones, NE cor. SW SE, Section 26-9-6, is a rig. Indian Territory Illuminating Oil Co.'s No. 1, NW cor. SE, Section 26-9-6, is drilling at 400 feet. The rig is up for No. 3 Bowlegs, SW cor. NW SE, Section 26-9-6. Pure Oil Co. has a rig up for No. 3 Lewis, SE cor. NE SW, Section 26-9-6. The rig is being built for No. 4 Lewis, NE cor. NW SW, Section 26-9-6, and for No. 5 Lewis, NW cor. NE SW, Section 26-9-6. No. 6 Lewis, SE cor. SW, Section 26-9-6, is on the ground. Tidal-Osage Oil Co. is drilling at 200 feet in No. 1, SE cor. NW, Section 26-9-6. The cellar is dug for No. 4 Fixico, SW cor. SE NW, Section 26-9-6. Sinclair Oil & Gas Co. has the rig up for No. 1 Cudjo, NE cor. NW, Section 35-9-6. T. B. Slick has a rig on the ground for No. 1 Frank, NW cor. NE, Section 35-9-6. Superior Oil Corp.'s No. 1 Cudjo, NW cor. SE NW, Section 35-9-6, is rigging up.

Plover Drilling Co. has a rig up for No. 3 McDaniels, SW cor. SE SE, Section 7-9-8. T. B. Slick has spudded No. 3, SW cor. SE, Section 7-9-8. Shaffer Oil & Refining Co.'s No. 4, NW cor. NE NE, Section 18-9-8, had sand at 3,297-95 feet and is spraying 8 bbls. of oil after being shot with 15 and with 25 quarts.

Southwestern Petroleum Co.'s No. 4, NW cor. NE SE, Section 18-9-8, had sand at 3,270-3,294 feet and made 45 bbls. after a shot of 40 quarts. Winona Oil Co.'s No. 1, SE cor. NW NE, Section 18-9-8, had sand at 3,246-67 feet and swabbed 100 bbls. No. 2, NE cor. NW NE, Section 18-9-8, is spudded. Tidal-Osage Oil Co. has a rig on the ground for No. 5, NE cor. NW, Section 26-9-6. Indian Territory Illuminating Oil Co. is drilling at 500 feet in No. 2, SE cor. SW NE, Section 15-8-6. Prairie Oil & Gas Co.'s No. 1, SW cor. SE NW, Section 14-8-7, is dry and abandoned at 3,232 feet. Magnolia Petroleum Co.'s No. 1, NW cor. SW NW, Section 23-8-7, had sand at 4,048-58 feet and made 20 bbls. naturally. Carter Oil Co. and others are drilling up pipe at 3,390 feet in No. 6, SW cor. SE NE, Section 31-8-8.

Dixie Oil Co.'s No. 5 Garner, SW cor. NE NE, Section 5-7-8, made 813 bbls. from sand at 4,238-59 feet. Magnolia Petroleum Co.'s No. 1, NW cor. SW NE, Section 5-7-8, had sand at 4,180-93 feet and swabbed 50 bbls. an hour for the first 4 hours. No. 10, C W half NW, Section 5-7-8, made 1,175 bbls. naturally from sand at 4,156-72 feet. Dixie Oil Co.'s No. 5, NE cor. SW NE, Section 6-7-8, made 800 bbls. from sand at 4,136-54 feet. The Carter Oil Co. has a rig on the ground for No. 1 Cudjo, NE cor. SE, Section 34-9-6.

Creek County

T. E. Mann has the rig up for No. 3 Noble, CNL SE NW, Section 5-19-8. Riverland Oil Co.'s No. 3, CEL W half NW, Section 1-18-11, had sand at 1,901-5 feet and is flowing 175 bbls. It will be drilled to the Wilcox sand. Magnolia Petroleum Co. is rigging up to drill deeper in No. 8 Wiley, SE cor. SW SE, Section 9-17-7. Alvord & West's No. 1, SE cor. SW SW, Section 14-17-8, had the Wheeler sand at 2,216-53 feet, the Prue sand at 2,277-2,313 feet and was shot with 80 quarts. It is making 65 bbls. oil and 20 bbls. of water on the swab. Devonian Oil Co. and others have spudded No. 1, NE cor. SE NE, Section 20-17-8. Burke Greis Oil Co. has spudded No. 1, NW cor. NW, Section 21-17-8. Savoy Oil Co. has built the rig for No. 7 Johnson, SE cor. SW NE, Section 22-17-8. In the Bristow district, the Olean Petroleum Co.'s No. 2, NW cor. SW NE, Section 5-16-8, had sand at 2,320-58 feet and was shot with 80 quarts. It made 20 bbls. after the shot. D. B. Mason's No. 5, SW cor. SE NW, Section 23-16-8, had the Dutcher sand at 3,114-16 feet with 200 bbls. an hour. It is now dead. A treating plant will be erected in an attempt to revive the flow. Inter-Ocean Oil Co. has a rig in for No. 4 Scott, NW cor. NE SW, Section 23-16-8. H. F. Wilcox Oil & Gas Co.'s No. 4 Harjo, SE cor. SW SW, Section 35-16-8, is rigging up to drill deeper.

McCulloch Oil Co. has the rig in for No. 1 Asbury, SW cor. SW, Section 1-17-9. The Texas Company's No. 2, NW cor. SW SE, Section 3-17-9, had sand at 2,021-56 feet and was shot with 80 quarts and made 100 bbls. No. 4, SW cor. SE

(Continued on Page 88)

NEW RAINBOW BEND COMPLETION FIRST IN MONTHS IN KANSAS FIELD

By J. L. Dwyer
Staff Correspondent, Kansas Fields

The past week offered no extraordinary news from the Kansas fields. The completion of one well in the Rainbow Bend Field in Cowley County, is of interest as it is the first well drilled in in that field for some months. The new well at Rainbow is Barnsdall Oil Co. and others' No. 4, SW cor. NW NW, Section 28-33-3, and it made 40 bbls. from the regular Rainbow formation.

In the Teeter Pool of Greenwood County, the Skelly Oil Co.'s No. 7 Teeter, NE cor. NW NE, Section 15-23-9, swabbed 70 bbls. from a total depth of 2,532 feet and is estimated at 200 bbls. It will be given a shot.

In Reno County, a wildcat well had a showing in what is thought to be the Wilcox sand at 4,294 feet. It is Frank Hopper's No. 1 Stevens, in Section 7-26-7w.

Rice County

Prairie Oil & Gas Co. has the rig up for No. 2 Libby, SE cor. SE, Section 34-20-6w. Yonkers and others' No. 2, SW cor. NE NW, Section 2-21-6w, had the sand at 3,363-3,470 feet and is completed for 700 bbls. This well has been producing for about two weeks. Prairie Oil & Gas Co. has the rig up for No. 1 Walstein, NW cor. SW NE, Section 2-21-6w, and for No. 2 Walstein, SW cor. NE, Section 2-21-6w.

Reno County

Port D. Fleeger and the Mid-Kansas Oil & Gas Co. have spudded No. 1, SE cor. NW, Section 35-23-7w.

Barber County

Doctor Rood's No. 1, NW cor. SE NW, Section 14-30-12w, is dry and abandoned at 4,323 feet.

Cowley County

Shawver & Sutton have spudded No. 2 Vedener, SE cor. NW, Section 11-30-4. J. A. Hull Co. and others have a rig up for No. 16 Kukuk, NE cor. NE, Section 24-32-4. T. E. Miller and others' No. 1, NE cor. SE NW, Section 14-30-6, is dry and abandoned at 3,355 feet. Buckeye Oil Co.'s No. 8, SW cor. NE SE, Section 25-32-5, is dry and abandoned at 3,450 feet. Duffield and others' No. 1, NW cor. SW SW, Section 19-32-5, is abandoned at 1,535 feet.

Butler County

Connelly & Ramsey have a dry hole at 2,645 feet in No. 2, CSL NW NE NW, Section 34-25-5. Lassen and others have spudded No. 1, SE cor. NW SE, Section 24-26-5. Liberty Oil Co. has spudded No. 4, C NE SE, Section 26-26-5. D. B. Golden and others have the rig up for No. 1, NW cor. SW, Section 20-26-7. Phillips Petroleum Co.'s No. 2, NW cor. SE NW, Section 16-27-6, is drilling at 750 feet. W. S. Hoyt has a rig on the ground for No. 1-A Oldbury, SW cor. NE NE, Section 17-27-6. Richmond and others are drilling at 500 feet in No. 1, NE cor. NW, Section 17-27-6. Derby Oil Co.'s No. 1, NW cor. SW, Section 27-27-6, had sand at 3,082-84 feet and made 140 bbls. of oil and 100 bbls. water. Empire Gas & Fuel Co.'s No. 1, SW cor. SE, Section 12-27-7, is spudded. White Eagle Oil Co. has spudded No. 2, SW cor. SE SW, Section 12-27-7. Phillips Petroleum Co.'s No. 1, NW cor. NE, Section 13-27-7, is spudded. No. 1, NE cor. NW, Section 13-27-7, is drilling at 250 feet. Mid-Kansas Oil & Gas Co.'s No. 3 Harris, NE cor. SE NE, Section 22-27-7, is rigging up. No. 2, NW cor. SW NW, Section 23-27-7, had sand at 2,672-2,763 feet and made 200 bbls. after a shot of 220 quarts. Clark & Erwin are drilling at 400 feet in No. 1, SW cor. NW, Section 14-28-3. Stafford and others' No. 8, SE cor. SE, Section 26-27-4, had sand at 2,036-78 feet and made 100 bbls. naturally. Hartman & Skaer have spudded No. 1-A, SE cor. NE, Section 19-29-4. Tom Johnson has a rig up for No. 7 Blackman, SW cor. NE SW, Section 3-28-6. Mid-Kansas Oil & Gas Co. has rigged up No. 1 Blackman, NW cor. SE SW, Section 3-28-6. Phillips Petroleum Co. has the rig up for No. 2 Pettit, SW cor. SE SE, Section 17-28-6. Magnolia Petroleum Co. has the rig up for No. 4 Pettit, SW cor. NE NE, Section 20-28-6.

Sumner County

Roxana Petroleum Corp.'s No. 1, SW cor. SE NW, Section 21-33-2, had sand at 3,300-23 feet and made 140 bbls. after a shot of 40 quarts. The total depth of the well was 3,621 feet and it was plugged back.

Greenwood County

Manhattan Oil Co.'s No. 3, NE cor. SE SW, Section 24-23-8, had sand at 2,572-2,626 feet and made 20 bbls. oil and 40 bbls. water after a shot of 60 quarts. No. 3, NE cor. NW SE, Section 25-23-8, is dry and abandoned at 2,645 feet. No. 25, NW cor. SE, Section 10-23-9, is abandoned at 2,400 feet. Skelly Oil Co.'s No. 4, SE cor. NE NE, Section 15-23-9, is drilling at 500 feet. Empire Gas & Fuel Co. has the rig up for No. 6 Morris, SW cor. NE NE, Section 19-23-9. Mid-Kansas Oil & Gas Co.'s No. 4 Hartley, NE cor. SW SW, Section 36-22-9, is drilling at 1,250 feet. The rig is on the ground for No. 5 Hartley, SW cor. NW SW, Section 36-22-9. R. E. Day and others are drilling at 650 feet in No. 4 Fuller, NE cor. SE SW, Section 1-22-10. Syndicate Oil Co.'s No. 4, SE cor. NW SW, Section 1-22-10, had sand at 2,001-59 feet and made 100 bbls. after a shot of 160 quarts. Manhattan Oil Co. and others have the rig up for No. 1 Shephard, SE cor. SW SE, Section 2-22-10. Theta Oil Co.'s No. 13, SE cor. NE SW, Section 8-22-10, had sand at 2,290-2,361 feet and made 60 bbls. after a shot of 160 quarts. Hazlett and others have the rig up for No. 22 DeMalhourie, NE cor. SW SE, Section 12-22-10. Phillips Petroleum Co. has spudded No. 8, NW cor. NE SW, Section 12-22-10. Sinclair Oil & Gas Co. has spudded No. 46, C east half SW, Section 20-22-10. Skelly Oil Co. is drilling at 500 feet in No. 1, SW cor. NE, Section 20-22-10. Tidal Oil Co.'s No. 4, CEL SE NE, Section 30-22-10, had sand at 2,463-2,503 feet

(Continued on Page 82)

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Deep and Shallow Wildcats Both Fail

But Wildcatting Operations in Louisiana and Arkansas Are Spreading Out, Especially On the Eastern Side

By James H. Dameron
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Aug. 9.—A general increase in completions in the proven fields of both states gave the state 2,359 bbls. of new production, but wildcat activity in both states hammered on the hopes of wildcatters when both deep and shallow tests failed.

Featuring the proven fields was the Gulf Oil Co.'s Ferry Lake lease in Caddo Parish. No. 246 Ferry Lake, Section 15-20-16, came in from 2,215 feet making 20,000,600 feet of gas and 400 bbls. of high gravity oil. Across in Section 15 The Texas Company gave up its deep test, No. 1 F. J. Bayou, at 4,405 feet. In Section 23 The Texas Company got a light show of oil in the Trinity horizon at 3,710 feet and is "feeling" its way deeper.

The most interesting of the other deep tests in Louisiana had not turned up anything at the end of the week. In Haynesville, Ramsey and Gilliland's No. 1-D Taylor was coring hard lime at 4,450 feet. Triangle's Sugar Creek test was drilling at 4,470 feet. In Cotton Valley the Ohio company's deep test is ready to resume drilling at 5,903 feet after cleaning up a fishing job. The Ohio company is drilling in an 8-inch hole at the present depth and has no definite depth to stop, and unless production is picked up within the next 150 feet it will set a new deep hole record in this district.

In Smackover a number of old wells are being drilled on down to the fourth sand in search of production. The fourth sand was discovered some time ago and produced gas. A few weeks ago Lion Oil & Refining Co. got an oil well in that sand. Since then Lion company and other operators have been searching for big pay in the fourth sand with the hopes adding more laurels to that great field.

Arkansas' most promising wildcat is Jones and Murphy's No. 1 Loutre Shingle Co., Section 5-19-14, 4 miles east of the south end of the El Dorado Field. Sand believed to be the Nacatoch was topped at 2,165 feet and penetrated 14 feet. The sand is streaked with shale. The test was swabbed down to the top of the liner, showing a little oil. The bailer was being put on Saturday morning. No gas or water showed.

An even dozen wildcat tests in both states were failures. One was a Blossom sand failure in the Bradley area in Lafayette County and another Union County 3,000-foot test was a duster. In Louisiana Lincoln Parish added another deep failure. Along the flexure in Louisiana eight tests failed.

Wildcatters Undiscouraged

Despite the discouragement and in face of nothing but failures for the past few months a fast wildcat campaign still marks that area. As fast as one test fails another is started somewhere else along the flexure and the campaign is spreading to the east side of the state. One of the latest blocks assembled was that of Lyde and Davison, a 10,000-acre block in Township 7, Range 9w, Natchitoches Parish. One 1,500-foot test is to be drilled on the block and acreage is being sold at $7 an acre.

A deal was recently closed by J. P. Evans, Shreveport wildcatter, in which he disposed of most of his De Soto Parish wildcat acreage. The block was a 6,100-acre block with one 3,000-foot gas well spraying about 15 bbls. of oil, and another deep gas well making 2,000,000 feet of gas. He sold the wells and 4,000 acres to Charles Fearn, Pittsburgh, Pa., for $25,000 cash and $100,000 in oil, half of the first seven-eighths produced. Evans retained 2,100 acres scattered over the block.

In all 53 completions were recorded last week, 34 of which were oil wells, 4 gas wells and 15 failures. Smackover and Lisbon led with 22, while Urania ended the week with eight wells averaging 105 bbls.

Although the Gulf's Swope well in the Georgetown area in Grant Parish aroused a new interest in that section, no new locations were staked during the past week. The Gulf's well was officially completed as a 35-bbl. natural well. Apparently operators with acreage in that area are waiting for the two tests east of the Gulf's well to reach the sand. One is coring and the other is shut down for repairs to the derrick.

Gains in Louisiana's fields stopped the toboggan of the district's production and it started climbing during the week. Four fields in Louisiana, Bellevue, Caddo heavy, Haynesville and Homer lost while the others gained and gave the state 300 bbls. more daily than during the previous week. Smackover heavy is still on the slide, but gains in Smackover light, Lisbon and Stephens gave Arkansas 35 bbls. more daily than last week's daily average.

PRODUCTION BY FIELDS

Louisiana	
Bellevue	2,290
Caddo light	10,260
Caddo heavy	2,910
Cotton Valley	7,955
De Soto and Red River	4,050
Elm Grove	555
Haynesville	9,560
Homer	5,600
Urania	13,260
Total	56,440
Arkansas	
Smackover heavy	122,995
Smackover light	15,455
El Dorado	7,480
Lisbon	10,305
Nevada	2,090
Stephens	1,815
Total	160,140
Total both fields	216,580
Total last week	216,245
Difference	335

Union County

Smackover and Lisbon both contributing brought Union County from its lethargy and sent completions climbing to 19 for the week. Lisbon led with most of its completions coming from the west side and south end of the pool. The best of the completions was on inside acreage. Humble Oil & Refining Co.'s No. 7 Goodwin, Section 16 17 16, finished in sand at 2,106-33 feet, flowing 100 bbls. Two others in that territory were small wells. Atlantic's No. 3 Goodwin, Section 16-17-16, is making 40 bbls. on the pump from sand at 2,133-67 feet and Rovenger Oil Corp.'s No. 8 Goodwin, Section 16-17-16, is pumping 30 bbls. from sand at 2,077 to 2,102 feet.

In the north end of the field Atlantic's No. 2 Ford, Section 3 17-16, was put on the beam at 2,098 to 2,132 feet and is making 40 bbls. Southern Crude Oil Purchasing Co.'s No. 5 Slaughter, Section 3-17-16, is pumping 20 bbls. from 2,070 to 2,118 feet.

Four were completed on the west side by Lion Oil & Refining Co. and one by Magnolia. Lion's No. A-18 Mitchell, Section 17 17-16, is pumping 25 bbls. from sand at 2,085 to 2,134 feet; No. A-19 is flowing 35 bbls. through 2-inch tubing from 2,132-64 feet; B-1 Mitchell, flowing 35 bbls. through tubing from 2,150-69 feet and No. C-2 Mitchell is making 20 bbls. of oil and 1,000,000 feet of gas from sand at 2,147-72 feet. Magnolia's No. 1 A. E. Slaughter, Section 17-17-16, is making 1,000,000 feet of gas and spraying a little oil from sand at 2,096 to 2,126 feet.

In the south end Gulf Refining Co.'s No. 2 Primm is flowing 49 bbls. from sand at 2,113-40 feet; Magnolia Oil Co.'s No. 1 Halsey, Section 20-17-16, is pumping 35 bbls. from 2,132-59 feet. Ohio's No. 7 Goodwin, Section 21-17-16, pumping 25 bbls. from 2,107 54 feet. Reynolds and Marrs' No. 3 Goodwin, Section 21-17-16, is making 20 bbls. on the pump from sand at 2,094-2,153 feet.

Lisbon Unchanged

Field operations in Lisbon changed little during the week in the total of rigs running. Ackerly and associates' No. 1 Murphy, Section 1-17-16, is coring at 1,150 feet, corrected depth. Atlantic's No. 3 Ford, Section 3-17-16, drilling at 650 feet. Atlantic's No. 6 Goodwin, Section 16-17-16, fishing for the bit at 2,017 feet. Eason and associate's No. 2 Mooty, Section 22 17-16, has 400 feet of oil in the hole from sand at 2,120-59 feet and is waiting for a standard rig, and a derrick is up for No. 4, CWL E half NW NW, Section 22-17-16.

Foster and McWilliams' No. 3 Mooty, Section 15-17-16, is being bailed to test at 2,105-48 feet. Six-inch was cemented at 2,075 feet at Gulf's No. 1 Parker, Section 21-17-16, at 2,059 feet at No. 2 and locations were staked for No. 3, SE SW NE, and No. 4, SW SW NE. A derrick pattern is on location for Gulf's No. 1 Patterson, NE SE, Section 20-17-16. Six inch was cemented at 2,104 feet at No. 3 Primm, Section 21-17-16, and No. 4, NW cor. Section 21, is being rigged. Humble's No. 1 Cruse, Section 21-17-16, has 500 feet of oil in the hole from sand at 2,096 to 2,119 feet and is waiting for a standard rig; location was made for No. 2, NE SE NE. Hunt's No. 7 Murphy, Section 4-17-16, is drilling at 720 feet.

Imperial's No. 3 Primm, Section 21-17-16, drilling at 250 feet. On the Lions' Mitchell lease, Section 17-17 16, No. A-6 is drilling at 100 feet; 6-inch was cemented at 2,115 feet at A-7; A-4 has 200 feet of oil in the hole from sand at 2,079 to 2,116 feet and waiting for a standard rig; A-11, SW NE SE, is a derrick; A-16, SE SW SE, is a derrick pattern; B-2, drilling at 1,900 feet; B-5, C SE SE, is a derrick. Magnolia's No. 2 Halsey, Section 20-17 16, drilling at 100 feet and location has been made for No. 3, NW NE NE, Section 20 17-16. Magnolia's No. 7 Harrell, Section 4-17-16, in sand at 2,100-40 feet and waiting for a standard rig. Magnolia's No. 2 Slaughter, Section 8-17-16, drilling at 1,130 feet.

J. L. Meek's No. 1 Milner, Section 15-17 16, drilling at 1,878 feet. Ohio's No. 8 Goodwin, Section 21-17-16, had sand at 2,140 84 feet and is waiting for a standard rig. The hole was junked at 420 feet at J. D. Reynolds' No. 5 Dumas, Section 15-17-16, the rig skidded 12 feet north and the second hole started. Rovenger's No. 1 Synder, Section 22-17-16, is drilling at 332 feet. Roxana Petroleum Corp.'s No. 2 Willett, Section 3-17-16, is drilling at 1,480 feet. Wingfield and associates' No. B 4 Slaughter, Section 3-17-16, had sand at 2,064 93 feet and is waiting for a standard rig, and B-3 is in sand at 2,100-27 feet waiting for a standard rig.

Smackover Completions

Smackover's completions on the Union County side were sprinkled liberally with failures. Gulf's No. 29 Hardy-Murphy, Section 4-16-15, was junked at 2,379 feet. Gulf's No. 38 Hardy-Murphy, Section 5-16 15, is a 135 bbl. pumper in sand at 2,358-73 feet. Humble Oil & Refining Co.'s No. B-2 Lawton, Section 7-16-15, tested salt water at 2,751 feet and was abandoned. Kennebrew and associate's No. 7 Williams, Section 3-16-15, is pumping 450 bbls. of fluid, 90 per cent salt water, from sand at 1,942-75 feet. Magna Producing Co.'s No. 6 Tatum, Section 7-16 15, is pumping 50 bbls. of fluid, 75 per cent salt water, from sand at 1,993 to 2,007 feet. Ohio Oil Co.'s No. 3 Ballard, Section 14-16-15, is making 20,000,000 feet of gas and spraying salt water and oil from 2,660-64 feet. Lion Oil & Refining Co.'s No. H-1 Murphy, Section 9-16-15, had the fourth sand at 2,662-96 feet and is making 25,000,000 feet of gas and spraying a little salt water. Sunny Jim Oil Co.'s No. 7 Lawton, Section 10-16 15, was put on the beam and is making 70 bbls., 4 per cent salt water and b.s., from sand at 2,590-97 feet. Skelly Oil Co.'s No. 2 Hall, Section 9-16-16, tested salt water at 2,726 feet and was abandoned.

Deepening of old wells keeps Smackover's field operations moving at the rate that has characterized it for months. J. E. Crosbie's No. 2 Cook, Section 16-16-15, is being rigged up to deepen. Eason and associate's No. 9 Murphy, Section 15-16-15, tested salt water at 2,351 feet and 6 inch is being recemented at 2,349 feet. Federal Petroleum Co.'s old No. A-9 Lawton, Section 10-16-15, formerly junked at 2,505 feet, is being rigged to deepen. Ferguson Drilling Co.'s No. 2 Howard, Section 7-16-16, is being rigged to deepen. The drill stem stuck at 2,622 feet at Gladys Belle Oil Co.'s No. 5-A Cook, Section 16-16-15. Six-inch was set at 2,140 feet at Grimes and Jones' No. 1 Prothro, Section 3-18-15. Gulf's No. 39 Hardy-Murphy, Section 5-16-15, is being rigged; No. 40, Section 3-16-15, is rigging and No. 22 T. C. Murphy, Section 9-16-15, is coring at 2,368 feet. Gulf's No. 46 Werner, Section 6-16-16, had sand at 2,247-72 feet and is waiting for a standard rig and a derrick is being built for No. 47 NE SE NE. H. M. Harrell's No. 7 Flenniken, Section 23-17-16, is drilling at 2,000 feet. Six-inch was cemented at 2,190 feet at Hatfield and associate's No. 3 Ennis, Section 23-17-16.

Cementing Casing

Five-inch casing was cemented at 2,661 feet at Hickman and associates' No. 7 Graves, Section 3-16-15. Hollayfield and associate's No. 10 Giller, Section 11-16-15, was dry at 2,700 feet and is being plugged back to the Nacatoch. Humble is fishing for a 4-inch drill stem at 2,342 feet at No. 5 Pate, Section 10-16-15, an old well being deepened. Three-inch casing was set at 2,409 feet at Lion Oil & Refining Co.'s No. 2 Hardy-Murphy, Section 9-16-15, and No. 10 Graves, same section, is coring at 2,663 feet. Magnolia Petroleum Co.'s No. 2 Childs, Section 8-16 16, had a show of oil at 2,606 feet and is coring at 2,608 feet. Eight-inch casing was cemented at 2,240 feet at Magnolia's No. 2 Werner Co., Section 1-16-17. Marine Oil Co. is sidetracking a tool joint at 2,150 feet at No. 1 Epps, Section 21-16-16.

Ohio's old No. 11 Pate, Section 10-16-15, is being rigged up to deepen. Peer Oil Corp.'s No. 7 Cook, Section 17-16 15, is drilling at 2,000 feet. A. H. Ramage's No. C-6 Lawton, Section 10-16-15, was dry at 2,609 feet and is being plugged back to the Nacatoch sand. Sam Richardson's No. M-2 Murphy, Section 14-16-15, tested salt water with a show of oil at 2,689 feet and 4½-inch casing is being set at that depth. Six-inch was cemented at 2,581 feet at Southern's No. B 4 Wells, Section 15-16-15. Standard Oil Co.'s No. 11 McClanahan, Section 6-16-15, set 4½-

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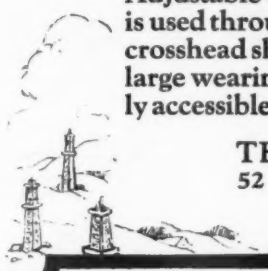

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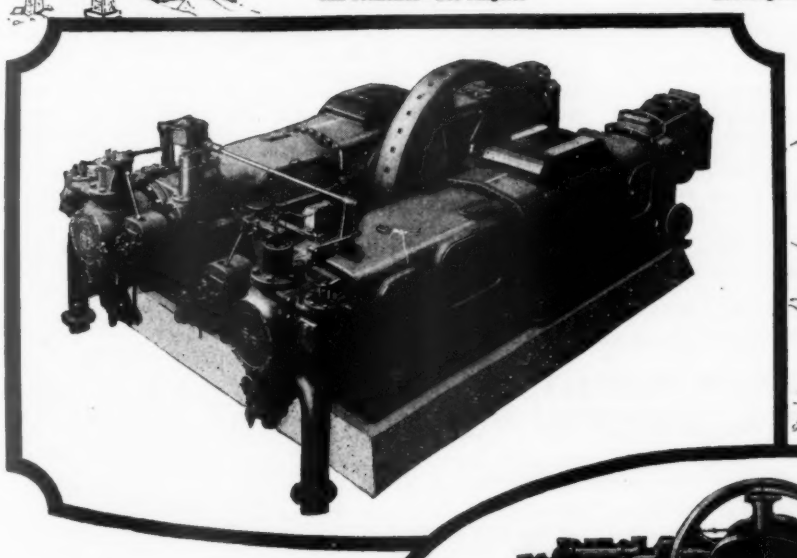

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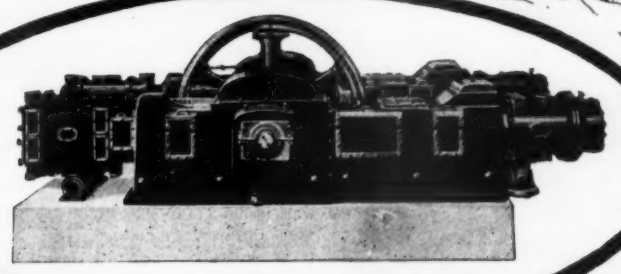

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BESSEMER COMPRESSORS

inch at 2,542 feet, tested 6,000,000 feet of gas at 2,572 feet and the test is drilling in soft sand showing oil at 2,574 feet. Sun Oil Co.'s deep test, No. 9 Brown, Section 8-18-15, is coring at 3,412 feet.

Ouachita County

Gulf's No. A-19 Umsted, Section 33-15-15, led completions in Ouachita when it was completed for a 175-bbl. pumper at 2,343-57 feet. Roxana's No. 6 Berg, Section 28-15-15, is pumping 70 bbls., 10 per cent b.s., from sand at 2,631-49 feet. Smith Drilling Co.'s No. 3 Shirey, Section 36-15-17, is pumping 15 bbls. from sand at 2,294-97 feet.

Gulf's No. A-20 Umsted, Section 33-15-15, is drilling at 2,575 feet. The derrick was pulled in at No. A-21 and the test is shut down at 400 feet. Houston Oil Co.'s No. 2 Hinton, Section 5-16-15, is drilling at 2,039 feet. Humble Oil & Refining Co.'s No. 10 Hildebrant, Section 28-15-15, is shut down at 1,959 feet for rig repairs. Six-inch was cemented at 2,549 feet at Imperial's No. 10 McClanahan, Section 6-16-15. Eight-inch casing collapsed at 1,911 feet at W. K. Keever's No. 2 Neeley, Section 27-15-16. A Meek's No. 2 Clawson, Section 35-15-17, has spudded. Phillips Petroleum Co.'s deep test, No. 1 Tate, Section 9-14-17, cased off water at 3,111 feet with 8-inch and is about ready to resume drilling with standard tools.

J. D. Reynolds' No. 3 Ratch and Cartier, SE NE SE, Section 2-14-18, has spudded. Standard Oil Co.'s No. 10 Murphy, Section 20-15-15, is being swabbed at 2,608-18 feet and 4½-inch casing is being set on rock at 2,567 feet at No. B-8 Bennett, Section 32-15-15. Sun Oil Co. is rigging up No. 3 Hardin, Section 27-15-16, to deepen, and derrick is up for Sure Oil Co.'s No. 4 Snyder, SW cor. Section 34-15-15. Louisiana Oil Refining Corp. took over Reynolds and associates' No. 1 Holton, Section 15-15-19, and is reaming to the bottom at 1,538 feet.

Columbia County

R. W. Aarnes' No. 2 Brown, Section 13-15-20, was down 3,590 feet when the 6-inch parted at 2,100 feet. An effort is being made to pull the casing. Gorden and associates' No. 5 Jones, Section 1-16-20, is a 12-bbl. pumper from sand at 2,217-35 feet and No. 6 Jones, NW NE NE, Section 1, is drilling at 50 feet. Scott Phillips' No. 2 Davis, Section 6-18-20, is drilling in chalk rock at 1,897 feet.

Nevada County

A derrick is up for Autrey Oil Co.'s No. 1 Wallace, NW cor. SE NW, Section 11-14-21. Location has been made for Bemis and associate's No. 1 Ellis, CEL SE SE, Section 2-14-21. W. F. Furen and associate's No. 1 Groves, Section 2-14-21, was junked at 1,200 feet and a new hole, 30 feet west, is drilling at 500 feet. Humble Oil & Refining Co.'s No. 4 Bodcau, Section 10-14-21, is drilling in pyrites at 2,535 feet. Humble's No. A-3 Ellis, SW NW SE, Section 2-14-21, is being rigged. A derrick is up for Zing and associates' No. 1 Moss, NW NW NE, Section 12-14-21.

LOUISIANA

Urania Field

The north and south ends of Urania were the loud speakers for that field during the week. George W. Wetherbee's No. A-2 Urania, Section 2-9-1e, in the south end, was completed in sand at 1,498½ to 1,500 feet flowing 200 bbls. of pipeline oil daily. It is the first well in that newly opened territory free from water. In the north end, Beckman & Freeman's No. B-3 Urania, Section 7-10-2e, came in flowing 200 bbls. from sand at 1,511-14 feet. In Tullos, H. L. Hunt's No. 15 Tullos heirs, Section 26-10-1e, was completed in 8 feet of sand topped at 1,490 feet flowing 150 bbls. daily.

Hope Oil Co.'s No. 2 Urania, Section 19-10-2e, was finished in sand at 1,561-64 feet, flowing 25 bbls. Love and associates' No. 6 Zimmerman, Section 25-10-1e, was completed at 1,515-17 feet flowing 75 bbls. W. T. Murray's No. 2 Doughty, Section 36-10-1e, is making 50 bbls. on the pump from sand at 1,507-11 feet. Natural Gas & Fuel Corp. completed No. K-7 Urania, Section 18-10-2e, at 1,544-49 feet, pumping 40 bbls. On the Winn Parish side of the field, O. W. Clark's No. 6 Harper, Section 26-10-1e, is flowing 100 bbls. from sand at 1,492 to 1,502 feet.

Six-inch casing was cemented at 1,502 feet at Beckman & Freeman's No. B-4 Urania, Section 7-10-2e, and No. B-5 is being rigged; derricks are up for No. B-6, SW cor. SW NE, and No. B-7, NE cor. SW NE. Surface casing was set at 100 feet at O. W. Clark's No. 5 Tullos heirs, Section 23-10-1e. Finn & House's No. 2 Smith, SW cor. NE SE, Section 26-10-1e, is a derrick. Six-inch was cemented at 1,490 feet at Hamilton and associates' No. 2 Wright, Section 26-10-1e. Six-inch was cemented at 1,492 feet at Hope Oil Co.'s No. 3 Urania, Section 19-10-2e. Eight-inch casing was set at 1,484 feet at H. L. Hunt's No. 2 Griswold, Section 2-9-1e, and a derrick is up for No. 3, NW cor. SW. Henry Jones' No. 2 Taylor, Section 23-9-1e, is drilling at 950 feet.

Six-inch was cemented at 1,505 feet at Keene & Woolf's No. A-1 Collins, Section 7-10-2e. Six-inch was cemented at 1,491 feet at Louisiana Oil Refining Corp.'s No. B-14 Tremont, Section 25-10-1e, and the plug at 1,493 feet is being drilled at No. C-1 Tremont, same section. A derrick is up for Louisiana's No. C-2, SW cor. NW, Section 35-10-1e. Montague Oil Co.'s No. 3 Zenoria Lumber Co., Section 11-9-1e, is drilling at 30 feet. McGaha and associates' No. 1 Urania, SW cor. Section 5-10-2e, is a derrick. Natural Gas & Fuel Corp.'s No. H-3 Urania, Section 18-10-2e, is waiting for a standard rig and is in sand at 1,558-61 feet; 6-inch was cemented at 1,537 feet.

Natural Gas Co.'s No. M-2 Urania, NW NE SE, Section 19-10-2e, is drilling at 300 feet and No. M-3, NE NW SW, Section 20-10-2e, is a rig. T. G. Randle's No. 1 Kinney, Section 7-10-2e, tested a little oil and lots of salt water in sand at 1,529-30 feet. A derrick is up for C. S. Thomas' No. 1 Urania, SE cor. NW NW, Section 18-10-2e.

Caddo Parish

The Texas Company gave up efforts to save No. B-1 F. J. Bayou, Section 15-20-16, as a deep sand producer and junked the hole at 4,405 feet. Of the deep tests drilling in Caddo Parish, Dixie Oil Co.'s No. 1 Jolly, Section 27-22-15, is drilling in broken lime at 4,191 feet. Gulf's No. 1 J. M. Byrd, Section 2-19-14, is drilling in black lime and shale at 3,495 feet. Gulf's No. E-1 Muslow, Section 35-21-15, is drilling in red shale at 4,757 feet. Magnolia's No. 16 Dillon, Section 24-21-15, is drilling in lime at 2,760 feet and No. 17 is going through hard sandy lime at 3,285 feet. Magnolia's No. 1 Spell, Section 29-21-15, is boring through hard lime at 3,454 feet. Magnolia's No. 1 Wiley Bradford, Section 24-21-15, is grinding through shale at 3,716 feet. The Texas Company's No. 63 Caddo L. B., Section 14-21-16, has a gas blowout at 2,399 feet which was killed and the test is shut down for orders. The Texas Company's No. 42 C. M. L. Co., Section 23-21-15, was bailed dry at 3,710 feet with only a small show of 39 gravity oil and the test is drilling ahead in lime at 3,712 feet.

The Gulf's old Ferry Lake lease enriched its value last week when Gulf's No. 246 Ferry Lake, Section 15-20-16, came in from 2,215 feet, making 20,000,000 feet of gas and 400 bbls. of high gravity oil. The only other completion in Caddo was The Texas Company's No. 8 J. K. Herold, Section 14-21-15, finished at 1,655 feet for a 20-bbl. pumper.

Bayou State Oil Co.'s No. 28 Hess, Section 24-22-15, is waiting for a standard rig at 1,050 feet. Surface casing was set at 100 feet at W. D. Chew's No. 5 State, Section 34-21-16. Chew's No. A-1 Caddo L. B., Section 9-20-16, had a show of oil at 2,290 feet and tested salt water at 2,295 feet. Dixie Oil Co.'s No. 15 Muslow, Section 7-20-15, is waiting for a standard rig at 2,258 feet. The drill stem is being fished for at 1,400 feet at Gilliam Syndicate's No. 1 Sellington, Section 17-21-14. On the Gulf's Ferry Lake lease, No. 245, Section 22-20-16, is waiting for 6-inch to set at 2,148 feet; No. 247, Section 15, is drilling in shale at 1,987 feet; 6-inch was cemented at 2,150 feet at No. 250, Section 29-21-16. Six-inch was cemented at 2,149 feet at Gulf's No. U-6 Levee Board, Section 9-20-16. Morris Drilling Co.'s No. 1 Palo Oil Co., Section 1-20-16, tested a small show of oil at 1,700 feet and is going ahead at 2,000 feet.

Six-inch casing was cemented at 2,541 feet at Owl Oil Co.'s No. 1 Bryson, Section 9-17-16, and No. 2 Bryson, Section 7-17-16, is tied up with a fishing job at 2,200 feet. Four-inch casing was dropped at 2,100 feet at Ramsey's No. 1 Muslow, Section 32-21-15. Standish Oil & Refining Co.'s No. 8 Allen, Section 23-22-15, is drilling at 200 feet. Superior Oil Co.'s No. 4 Youree, Section 26-20-15, pumped salt water and a little oil from 2,301 feet and is being plugged back to 2,290 feet.

Eight-inch casing was set at 42 feet at The Texas Co.'s No. 48 C. M. L. Co., Section 26-21-15. Six-inch casing was cemented at 2,378 feet at The Texas Company's No. 54 S. P. Harrell, Section 4-21-16. Same company's No. 4 Hicks & Payne, Section 21-21-15, is being reamed to the bottom at 2,335 feet. The Texas Company's No. 3 Perry, Section 3-20-16, is drilling at 1,677 feet. Thomason and associates' No. 1 Muslow fee, Section 31-21-15, is drilling at 1,370 feet. Victor Wenzell's No. 1 Thomas, Section 15-20-15, is drilling in chalk rock at 1,612 feet and his No. 1 Wemple, Section 14-20-15, is drilling in gumbo at 1,700 feet.

Monroe District

Two gas wells with a combined production of 15,000,000 feet were added to the Monroe Field during the week. Southern Carbon Co.'s No. 4 Grayling, Section 28-21-4e, Union Parish, led when it made 11,500,000 feet of gas from 2,164 feet. Natural Gas & Fuel Corp.'s No. 19 Crossett, Section 24-21-4e, Morehouse Parish, was completed at 2,210 feet for a 3,500,000-foot gasser.

In Morehouse Parish, Feazel's No. 1 Archer, Section 22-20-4e, is drilling at 1,600 feet. Standard Oil Co.'s No. 1 Cooperage, Section 34-21-3e, is drilling in gummy shale at 444 feet. Six-inch was cemented at 2,140 feet at United Carbon Co.'s No. 1 Burton, Section 24-20-4e. In Ouachita Parish, Central Co.'s No. 1 Kerr, Section 12-9-4, is drilling at 2,050 feet. Gulf Co.'s No. 1 West Virginia, Section 17-17-5e, is a rig. Six-inch was cemented at 2,130 feet at Hatcher & Evans' No. 4 fee, Section 17-19-4e. Eight-inch was cemented at 868 feet at R. J. O'Brien's No. 2 Ray & Green, Section 35-9-4e. Six-inch was cemented at 2,114 feet at Palmer Corp.'s No. 1 Central, Section 1-19-4e. Surface casing was set at 149 feet at Palmer Corp.'s No. 3 Cole, Section 43-19-4e. Six-inch was cemented at 2,126 feet at Southern Carbon Co.'s No. 49 fee, Section 35-19-4e. A derrick is up for Southern's No. 4 Ladell, 660 feet south and west NE cor. Section 2-19-4e.

Location has been made for United Carbon Co.'s No. 1 Patton, 3,630 feet east and 10 feet north SW cor. Section 10-20-4e. In Union Parish, Arkansas Fuel Oil Co.'s No. 1 James Reeves, Section 14-20-1e, is drilling in broken lime at 4,065 feet. A derrick pattern is on location for C. E. Camette's No. 1 Tugurie, 1,200 feet south and 700 feet west NE cor. Section 21-22-1e. R. W. Rhodes' No. 1 Pickens, Section 22-22-2w, is drilling at 50 feet. Eight-inch casing was cemented at 930 feet at Ruston Drilling Co.'s No. 1 Mayfield, Section 30-20-4e. The plug at 2,075 feet is being drilled at Southern Carbon Co.'s No. 5 Grayling Section 21-21-4e.

Webster Parish

Ohio Oil Co.'s No. 7 Sidney heirs, Section 16-21-10, Cotton Valley, was completed at 2,537-40 feet for a 7-bbl. pumper. Humble's deep test, No. 2 R. R. Cox, Section 22-21-10, is drilling in gumbo at 3,279 feet. Magnolia's No. 3 Tiner, Section 21-21-10, is drilling at 400 feet. R. W. Norton's deep test, No. 1 Josey & Masey, Section 27-21-10, is drilling in lime and shale at 3,552 feet. Ohio Oil Co.'s No. 1 Cox, Section 23-21-10, stuck the drill stem at 5,903 feet. Ohio Oil Co.'s No. 3 Holloway, Section 23-21-10, is being bailed to to test at 4,401 feet. Palmer Corp.'s No. 1 Crichton, Section 30-20-8, is drilling at 850 feet. Smitherman & McDonald's No. 1 Oakley, Section 29-33-11, is fishing for the drill stem at 4,681 feet. Southern Crude Oil Purchasing Co. and Ramsey's No. 1 Munn, Section 1-22-10, is drilling in anhydrites at 4,524 feet.

ARKANSAS WILDCATS

Union County

Arkansas Drilling Co.'s No. 1 Townes, Section 34-19-11, is drilling at 2,005 feet. Six and five-eighths-inch casing has been set at 2,165 feet at Jones & Murphy's No. 1 Loutre to test sand at 2,165-79 feet. West of Wesson, Natural Gas & Fuel Corp. and Atlantic's No. 1 Taylor, Section 23-18-17, is drilling at 1,100 feet. Northeast of Hillsboro, Simms Oil Co.'s No. 1 Simmons, Section 9-18-13, had the Nacatoch at 2,196 feet and 8¼-inch is being set at 2,187 feet to test.

(Continued on Page 121)

SECURING NEW PERMITS TO DRILL SEEN AS HOPEFUL SIGN IN MEXICO

By George Blardone
Staff Correspondent, Mexican Fields

TAMPICO, Mexico, Aug. 6.—There was only 11 wells completed in Mexican fields during the past week, of which four can be placed in the production column. The new production was some 2,300 bbls. The failures total seven holes.

A hopeful sign as the week ended was the fact that a number of new permits to drill were secured. This will do much toward adding more strings of tools to the active operating list, but, what is more to the point, it serves to increase the moral of the operators, large or small, who show and have, a disposition to carry on.

The best well of the week was Mexican Sinclair Petroleum Corp.'s No. 29 Tananturo, in the old Paunco Field, which is rated good for 1,500 bbls. at 1,775 feet. Transcontinental Petroleum Co.'s No. 16 Ojital, same division, scored 500 bbls. at 1,705 feet. Mexican Gulf Oil Co.'s No. 4-A Piedras is a stripper for 100 bbls. at 200 feet.

In the South fields, International Petroleum Co.'s No. 52 Toteco is good for perhaps 200 bbls. at a sub-sea level depth of 1,650 feet.

The Failures

In the northern fields, the failures follow: La Corona's No. 182, Lot 4, in the Cacalilao sector, originally reported as a well went to salt water on exploitation, hence it is in the discard. The company's No. 120 Las Piedras, in the Paunco district, drilled into salt water at 1,970 feet. Transcontinental Petroleum Co.'s No. 271, Lot 4, Cacalilao, is a dry hole at 2,160 feet. In the Ebano sector, Mexican Petroleum Co.'s No. 55 Chijol and No. 50 Midway are both dry holes at 2,360 feet and 2,263 feet respectively. In the La Pez, the company's No. 12-A may be a small well from an upper stratum. Its finishing depth was 1,870 feet.

Up in Altamira, in the State of Tamaulipas, where interest is commencing to center, National Lines' No. 56, a Federal zone well, is a dry hole at 2,510 feet, in the Tamasopa limestone.

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Consider Electrifying Big Muddy Field

Midwest Success at Salt Creek and Abundance of Power Results in Survey. Oil Tax Assessments Increased

By Frank B. Taylor
Staff Correspondent, Rocky Mountain Area

CASPER, Wyo., Aug. 9.—The Mountain States Power Co. which supplies Casper with electricity is making a survey looking to the operating of the Big Muddy Field by electric power. The company's plant are located at Casper and the Big Muddy Field lies 28 miles east of this city. Since the Midwest Refining Co. showed the way for operating one unit plant producing electric power and the ease and economy with which this is done at Salt Creek; the oil men of the various fields have been looking over their holdings and considering whether electric power as used in Salt Creek could be applied to their operations.

The Continental Oil Co. and the Ohio Oil Co. own almost all the wells in Big Muddy while The Texas Company has a few wells in the west end of the field. At present these wells are being pumped with oil engines and with gas engines in some cases.

Raise Tax Assessments

The valuation on real estate and other property in Wyoming has dropped sharply the past year and in order to make up the deficit caused by this falling off in values, the State Board of Equalization has raised the tax assessments on all oil lands and oil properties in the State.

This raised valuation amounts to a horizontal increase of 15 per cent upon oil refineries, oil tools, rigs, casing piping, water, oil and gas gathering lines, gas plants and all other equipment used in the oil fields for the production of oil or gas.

The total valuation of Natrona County properties under assessment made in 1926 amounts to $84,177,279 and in 1925 the assessed valuation was $98,000,000.

In order to conserve the gas that is found in some wells in the Sunburst Field in Montana, in the Sunburst sand, a meeting of the Federal and State officials whose departments have charge of the oil fields, and the oil operators, was held at Shelby and a set of regulations has been approved that will be a guide for the future development in that field.

Wells that find gas in the Sunburst sand about 1,200 feet deep must set a string of casing so as to case off the strata above the sand before proceeding to drill to the Ellis sand. Also another string of casing must be set to shut the Sunburst gas off from the Ellis sand when the latter sand is reached.

The law case over the ownership of the river bed leases in the Colorado River, below Moab, Utah, has been transferred from the Circuit Court to the Federal Court. In this action The Texas Company had taken a lease through purchase, from a party who had staked out a claim embodying part of the river bed near the Cane Creek well. The Midwest Refining Co. and others had also secured a title to the same land through another party and the whole matter is now up to the Federal Court to determine the rightful owner. The question of ownership hinges on whether the State of Utah has the right to grant a lease that includes the river bed, or whether the Government is the rightful authority in such matters.

The refinery that was burned at Artesia recently, belonging to the Continental Oil & Refining Co., will be rebuilt at once and is expected to be operating again within the coming month. The damage is reported to be about $20,000.

The Mosher Syndicate's well drilling on the Emigrant Gap anticline east of Casper, Natrona County, has reached the top of the Tensleep sand and should be through it soon. So far this test has shown only water in the sands passed through and in case the Tensleep sand is found productive, the oil is likely to be a black crude. This well is located in Section 30-34-81.

The Utah Southern Oil Co., drilling near Garland, Wyo., on the Garland Dome, Big Horn County, has completed a bad fishing job by cleaning the hole and is drilling again at 1,880 feet.

The discovery well of the Utah Southern and the Midwest at Cane Creek, Utah, is drilling after setting the 6¼-inch casing at 3,272 feet in a black shale. The well being drilled by the same firms on the Shaffer Dome about 5 miles south of the discovery well is 1,738 feet and is setting the 10-inch pipe there before going on down. This well hopes to find the same sand that contained oil in the Cane Creek well at about 1,850 feet, or somewhat higher than the discovery well had it.

The Utah Southern Oil Co., drilling in the Lockhart Canyon, near Moab, Utah, has made location and is running a derrick. The Canyon No. 1 well, located in San Juan County, Utah, is at 1,040 feet and is underreaming. The new location on Cedar Mesa, in Noble County, San Juan County, is also rigging up.

The deep test drilling in the Pilot Butte Field by the Pilot Butte Oil & Gas Co., has reached a depth of 1,200 feet and is in shale. The Muddy sand and production is expected about 2,500 feet.

The Foreman Oil Co. has bought a rig that the Continental Oil Co. had at a wildcat location in southern Natrona County, on what is known as the Graybeal structure and the Foreman Oil Co. will drill a well there.

Completions

The Midwest Refining Co. completed eight new producers in the Salt Creek Field through subsidiary companies, the past week. The Salt Creek Consolidated Oil Co. completed a Lakota sand well at 2,510 feet on Section 34-40-79, that started off at 1,270 bbls., but was shut in after a test and will not be produced at present.

On Section 23-40-79, the Wyoming Oil Fields Co. found production in the shale at 2,110 feet that will do about 100 bbls. On Section 14-40-79, the Midwest Oil Co. has a shale producer at 1,290 feet that will make a pumper and the Wyoming Associated Oil Co. on Section 25-40-79, found a 60-bbl. producer at 650 feet in the shale.

The Midwest Oil Co. found a small well on Section 11-40-79 at 2,308 feet and another on the same section at 2,080 feet. The same company has a producer good for 25 bbls. on Section 27-40-79 at 1,755 feet and one on Section 14-40-79 at 2,308 feet that will make a small pumper.

On Section 29-40-78 The Texas Company has a 50-bbl. well in the third Wall Creek sand at 2,677 feet and also a second sand producer on Section 19-40-79, that will do 30 bbls. at 2,965 feet.

Area Deemed Worthless

For several years past, the oil scouts working in Wyoming and geologists have received at various times, letters asking their opinions on the area between the Salt Creek Field and the Big Muddy Field in central Wyoming, especially on a Tertiary structure known as the Cole Creek Dome. The information usually given is that the area is worthless as far as the oil or gas possibilities are concerned.

In Wyoming three great geological divisions are of interest to the oil fraternity, the Tertiary, Cretaceous and the Carboniferous. The Tertiary is not considered an oil-bearing area although in a few places production has been found in the Tertiary shale or sand lenses. However, these productive spots are thought to have obtained their oil from the Cretaceous below through fault planes that permitted the oil to become bedded in the sand lenses of the Teritary strata.

The Cretaceous is the main oil-producing area, in this age the famous Frontier formation was laid down as well as the Dakota formation below. Most of the light oil fields find their production in the Cretaceous. This area was laid down before the Tertiary and is therefore just under it.

The Carboniferous lies under the Cretaceous and carries the black oil sands that produce the black oils of this region. The Carboniferous as used here includes several other areas that are comparatively thin.

It will, therefore, be seen readily that except for the chance of striking a fault plane carrying oil up from the Cretaceous, the Tertiary is barren and as the Tertiary in some parts of this State is over 10,000 feet thick, it is evident that it would be useless to attempt to reach the Cretaceous sands that lie below the Tertiary with the drilling equipment as is now in use in the oil regions.

In the area mentioned, generally contained in Township 34, 35 and 36 of Ranges 75, 76 and 77, there has been one well put down which is reported to have reached a depth of 2,930 feet though this is doubted by many. This well was drilled on Section 27-35-77 and was dry. It never reached the Frontier sands and it is considered by many that it never reached the upper Cretaceous. Another attempt to drill was made on Section 36-35-77 and the hole reached a depth of 1,600 feet and found nothing. A few validation holes were also drilled when the wild scramble for leases took place in 1916-17, but these only went about 100 feet deep.

In the letters coming from the East

(Continued on Page 129)

MARLAND TO DRILL FIFTY TESTS IN HUDSON BAY AREA NEXT YEAR

By Victor Lauriston
Staff Correspondent, Canadian Fields

CHATHAM, Ont., Aug. 7.—In the Canadian West, the recent arrangement for the development by the Marland Oil Co. of the Hudson's Bay Co. holdings in the prairie provinces has already been followed by the launching of a comprehensive geological investigation. G. M. Ruby, chief geologist for the Hudson's Bay-Marland Oil Co. is already in Alberta with a number of Marland and Hudson's Bay officials. The party, besides Mr. Ruby, includes Dr. W. A. J. M. Vanwaterschoot Vander-Gracht, vice president of the Marland Oil Co.; M. G. Gulley, personal scout of E. W. Marland; E. V. Whitwell, J. H. Vander-Gracht, B. F. Hake, E. C. Parker, H. S. Bryant, R. Hollman, C. B. Wells, R. McNeely, D. Powers, W. H. Howell, and C. G. Willis, assistant to Doctor Vander-Gracht.

Discussing the work being undertaken by the company, Mr. Ruby said: "We have come to Canada with an open mind on the question of the oil possibilities here, and any development work will depend upon our findings and reports. So far, we have just been getting a line on the general geology of western Canada. We have gone to the Dominion Geological Survey for all the information they can give us, and have been gratified by the immense amount of material they have furnished us from their studies of the country. We are now going into this with a view to putting our parties out to work over various areas during the present year.

"On the result of their studies will depend how much further we will go into the details the following year, that is, whether we will maintain large or small parties in the various localities where it appears there may be prospective oil producing structures. All I can say is that the Dominion officials who have provided us with information are highly enthusiastic over the outlook."

Four parties will operate on the prairies, there being two geologists in each party, with the necessary assistants. Messrs. Ruby, Gulley and Willis will for some time remain in Calgary. The survey program is the most ambitious ever undertaken in Canada, being planned to ultimately cover the three prairie provinces. It is understood that while primarily concerning itself with the Hudson's Bay Co. holdings, the survey will extend to any promising oil areas in the Canadian west. No drilling will be undertaken this year, and the survey work will be continued for several years if necessary.

It is understood that the arrangement between the Marland Oil Co. and the Hudson's Bay interests calls for the drilling of 50 wells next year; or approximately as many new tests as are actually drilling in Alberta this season.

Turner Valley Field

In the Turner Valley Field, southwest of Calgary, McLeod Oil Co.'s No. 2, LSD 16, Section 1-20-3w5, is estimated good for 250 bbls. a day of light oil, with about 10,500,000 feet of wet gas. A 6-inch line with drips to collect the oil is to be constructed. The drillers are fishing for the tools lost when the heavy wet gas flow was struck; and if these are recovered the test may be drilled further into the lime.

Vulcan Oils, Ltd.'s No. 1, LSD 11, Section 13-20-3w5, is at 4,890 feet and fishing. The casing is within 18 inches of the top of the Madison limestone and all the oil struck in the upper horizons has been shut off.

Dalhouise Oil Co.'s No. 1, LSD 4, Section 18-20-2w5, has drilled past the lost bit and at 3,546 feet is near the top of the Madison limestone. Dalhouise Oil Co.'s No. 3, LSD 10, Section 13-20-3w5, is at 3,345 feet and pulling the last of the 6-inch casing. Dalhousie's No. 5, LSD 16, Section 30-19-2w5, has recovered a lost bit and is drilling steadily at 700 feet.

Illinois-Alberta Oil & Refining Co.'s LSD 14, Section 12-20-3w5, is reported shut down at 3,679 feet after striking a small gas flow in the top of the Madison limestone. Some oil accompanied the gas, and the heavy pressure twisted the cable.

(Continued on Page 122)

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New Field Opened at Seal Beach, Calif.

Marland Oil Co.'s No. 2 Bixby Blew in Making 1,300 Bbls. of 25 Gravity Oil With Sand Tapped Only 20 Feet

By L. P. Stockman
Staff Correspondent, California Fields

LOS ANGELES, Calif., Aug. 7.—The outstanding feature during the week from a development standpoint was the discovery by the Marland Oil Co. of a new field at Seal Beach when No. 2 Bixby blew in doing 1,300 bbls. daily of 25 gravity oil from 4,427 feet while a casing test was being made after a second cement job.

The Marland well, spudded June 4, blew in on the afternoon of August 4. Marland's Selover & McGrath lease of 115 acres and the same company's Bixby lease of 250 acres are the cream of the field. The Standard has a lease on Alamitos land and water property, a shoestring extending across the field, about 100 acres of which will be productive. Marland thinks the field will be a little over 1 mile long and rather narrow.

There is good possibility of some town lot play in both the western and northern parts of the district, but the eastern and southern areas are defined because of dusters in each district. The completion of this well disproves the Associated's big Hellman lease and also eliminates Union's Bryant and Shell's Bryant leases.

The remarkable thing about the Marland's new well is that only 20 feet of oil sand has been tapped and since this 20 feet has not even been cleaned out since the well blew in prematurely the company thinks it would do better than 2,000 bbls. daily. The oil is running into tanks and then delivered to the Associated on a day-to-day contract.

Wildcat Operations

None of the wildcats in the Manhattan Hermosa Beach area showed any favorable indications during the past seven days and it is generally rumored that George W. Johnson is contemplating the abandonment of his test in that district because of the rather discouraging outlook. He has not yet announced his intention of doing so but an early notice would not be at all surprising. The Julian Petroleum in the mean time is going steadily ahead with not a single show from the grass roots down to 5,201 feet. The Milham Exploration Co. is to be congratulated on its perseverance at Playa del Rey but this test has been on the doubtful list for some time and it would be a big surprise if the company should pick up something interesting.

The Barnsdall's wildcat in the Avocado Heights area near Puente is not looking any too promising and, while a duster would be rather discouraging there is some consolation in knowing that only an infinitely small number of all the tests drilled ever open up new fields. The Petroleum Securities and Standard are still at work on their respective tests in the San Fernando Valley but neither hole is deep enough to pick up the pay. The Marland appears to have a duster in No. 1 Lazard in Kern County at 5,260 feet but work will undoubtedly be pushed ahead until a conclusive test has been made.

A. G. Schwartz reported a slight showing of oil and gas in his test near Rosedale in Kern County but it was not of sufficient importance to stop drilling and make a test. The Standard is still working on its survey structure holes in Ventura County and will probably start work on a deep test in the near future if the outlook is at all favorable. That the Marland evidently contemplates drilling a test on the Jacalitos anticline in the near future is evidenced by the fact that the company is still acquiring leases along the northeast flank where it already has a considerable amount of acreage tied up. There is also an excellent possibility of some new wildcatting near Famosa, as the General Petroleum recently tied up considerable acreage on the Laredo Mesa at that point.

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, Well and Location—	S-T-R	Depth	Status
Marland, No. 2 Bixby, Seal Beach	11- 5-12	4,427	oil sand
Union, No. 1 Bryant, Seal Beach	2- 5-12	4,775	br. sh. drilling
Bellflower, No. 1 Blythe, Bellflower		rig	good area
Marine, No. 1 Strong, Bellflower	24- 3-12	rig	good area
Feather & Preston, No. 1 Blinn, Clearwater	16- 3-12	rig	spud soon
Union, No. 1 Howland, El Segundo	24- 2-15	4,150	sd. sh. drilling
Smith Bros., No. 1 Johnson, Hawthorne	17- 3-14	rig	spud soon
Associated, No. 1 Cypress, Inglewood	34- 2-14	1,207	sand drilling
Johnson, G. W., No. 1 Martin, Manhattan	30- 3-14	5,300	sd. sh. drilling
Julian, No. 1 Trust, Manhattan	19- 3-14	5,201	sd. sh. drilling
Milham, Explth., Well No. 2, Del Rey	34- 2-15	5,657	br. sh. drilling
Barnsdall, No. 1 Merlo, Puente	35- 1-11	4,005	sh. sh. drilling
Petroleum Sec., No. 1 Sesnon, San Frenando	14- 2-16	2,750	br. sh. drilling
Standard, No. 1 University, San Fernando	15- 2-15	3,418	sd. sh. drilling
Standard, No. 1 Austin, Topango	11- 1-17	930	hd. sd. drilling
Union, No. 1 Saugus, Saugus	15- 4-16	3,656	br. sh. drilling
Union, No. 1 Olinda, Orange Co.	15- 3- 9	5,309	suspended
Union, No. 2 Olinda, Orange Co.	10- 3- 9	4,431	gr. sd. drilling
IMPORTANT NORTHERN CALIFORNIA WILDCATS			
Marland, No. 1 Williams, Santa Barbara	32- 9-32	4,286	prod. test
Marland, No. 1 Lazard, Kern County	27-26-20	5,260	unfavorable
Schwartz, A. G., Well No. 1, Rosedale	25-29-26	4,300	sd. sh. drilling
Taylor, W. W., Well No. 1, Clovis	5-13-22	900	hd. sd. drilling
Associated, Well No. 1, Huron	20-19-17	2,260	fishing
Fresno United, Well No. 3, Raisin City	23-15-18	3,490	suspended
Bolsa Chica, Well No. 1, Kettleman	30-23-19	2,190	suspended
Marland, No. 1 Elliott, Kettleman	12-22-17	5,570	fishing
Shell, No. 1 Berlywood, Moorpark		4,673	fishing
C. C. M. O., No. 1 Hobson, Ventura Co.	22- 3-24	5,308	sd. sh. drilling
Milham Explth., No. 1 Sexton, Ventura Co.	19- 3-22	5,780	hd. sd. drilling
Standard, No. 1 Palmer, Santa Barbara	13- 9-33	1,728	sd. sh. drilling
Pan American, No. 1 White, Monterey Co.	27-23-13	2,030	sd. sh. drilling
Pyramid, Well No. 1, Monterey Co.	26-21- 9	2,370	promising
Shell, No. 1 Murphy, Petaluma	29- 5- 6	2,095	hd. sd. drilling
Miley Explth., No. 2 Red Mount, Ventura Co.	7- 3-25	310	swedging

Red Mountain District

Prospects for some interesting wildcatting in the Red Mountain district where the Miley Petroleum Exploration Co. is pioneering also appears certain as a group of Ventura business men have recently acquired 2,500 acres in the Matilija area, about one-half mile from the Miley property. Reports from Ventura indicate the syndicate intends to prosecute a drilling campaign in the near future to determine the possibilities of its new lease. The men in the group are Harry Malloy, Rex Crandall, C. B. McDonnell and Claud Gregg. They spent last week in Los Angeles completing a scrutiny of titles and taking the necessary legal steps. The 2,500-acre tract is in a single unit and adjoins the Burnham Soper Ojai Development Co. and Hoffman ranches and extends over the hills toward Santa Barbara. Men in the syndicate today said that two well defined oil structures had been located and that oil development would be undertaken in the near future.

At one place the land comes within half a mile of the Miley drilling operations on Red Mountain. The tract also adjoins the Grant ranch in the Matilija, owned by McDonald, and a rig will be erected there for drilling by a company which has had the land under lease for 18 months.

Huntington Beach Find

The Ventura Avenue Field in Ventura County and Huntington Beach in Orange County shared the spotlight during the current week, due to the completion of important wells in each area. The former, as would naturally be expected, yielded the largest well finished in the state during the period in question but, because of its effect on future development, the Superior's No. 1 Jones in the latter area was without doubt the most important completion registered in several months. This well is of paramount interest because it will undoubtedly lead to considerable work at least during the balance of this year. The Superior finished No. 1 Jones in the southwest extension of the Huntington Beach Field as a 280-bbl. pumper from 3,063 feet, after the Wilshire Oil Co. had spent several weeks attempting to complete its drilling project located about two blocks away. The Superior developed a 69-foot zone and, while this shallow sand will probably not permit a very close spacing of wells, it has proven a powerful stimulant with the result that some 40 tentative locations have already been staked.

Operators have been holding back development of this town lot section not principally through any desire to prevent another overproduction situation but rather because they were somewhat doubtful as to whether this area would actually prove commercially productive. The new work already started, and that projected as a result of the completion of the Superior's No. 1 Jones, may be just a starter if a deeper sand is developed, which seems quite likely. It is interesting to note in this connection that the Wilshire has already drilled through the Superior zone and is headed down in search of a lower horizon, which, it is expected, will yield flowing wells similar to those being finished by the Standard on its Lease B just north of the town lot area. The Standard picked up this same shallow zone on its property to the north but is not producing from it as the deeper horizon is much more satisfactory.

Town Lot Drilling

Before digressing further, it would not be amiss to call attention to some of the work already under way. The Superior and Standard are not losing any time in taking advantage of the former's discovery and that the area offers excellent possibilities is evidenced by the fact that the Standard's geological staff, which has undoubtedly been making a study of the situation for several months, has recommended the drilling of four wells immediately. The Standard is in a rather peculiar position in that, while it does not as a rule participate in town lot drilling, it must of necessity resort to this practice in order to protect its property from being drained. When the Standard purchased the Huntington Beach Co. several years ago it came into possession of approximately 250 lots in the southwest extension which the latter had subdivided but still retained. It is these lots, checkerboarded all through the town lot area, which the Standard must develop in order to prevent undue drainage. Within a few hours after the completion of No. 1 Jones, the Standard flagged locations for No. 1 Anderson and Nos. 1, 2 and 3 on the Huntington property. The Superior followed suit by locating No. 1 Gilmore, No. 1 Babbitt, No. 1 fee and No. 1 Hunt, this company holding more potential oil land than any other operator with the exception of the Standard.

The Wilshire hauled in material for its second well in this area but shortly after construction work got under way the company found that the derrick was approximately 10 feet over the property line and it was found necessary to remove it and relocate the well. George F. Getty and the McKeon Oil Co. have also started additional rig construction. The California Petroleum and the Pan American have staked locations for their initial tests and will undoubtedly have rig timbers on the ground within the next day or so. The Miley Petroleum Exploration Co. started rig construction previous to the completion of No. 1 Jones and as a result is several days ahead of the field. This well, No. 1 Pacific Electric, in Lot 13, Block 122, has just been spudded in and, if future developments warrant, five more holes will be started.

Fast Work

The Julian Petroleum, one of the three original wildcatters, has its No. 1 Lambert down 2,990 feet and will initiate work soon on another hole, No. 1 Treat, a lease having just been consummated for this property. Work is getting under way so quickly that it is practically impossible to keep step with developments. Several pipeline crews have already started laying water and oil lines and the various supply companies are putting on additional help to take care of their large bookings. Competent geologists are of the opinion that a deeper zone underlies the major part of the present unrestricted town lot section but are somewhat reluctant to go on record

(Continued on Page 113)

TANKER SHIPMENTS FROM LOS ANGELES AND GULF COAST PORTS

Commodity—	Total This week	Daily Average	Total Last week	Daily Average	This year To date	Same time Last year
Crude oil	86,503	12,358	231,277	33,092	7,540,764	9,524,170
Fuel and gas oil	137,426	19,632	233,104	33,301	5,552,539	237,873
Gasoline	334,556	47,794	77,126	11,018	4,302,744	5,004,953
Tops	.....	.....	.....	.....	74,619	327,185
Coastwise—						
Crude oil	302,018	43,145	386,642	55,235	14,019,909	18,926,670
Fuel and gas oil	173,521	24,789	399,925	57,132	6,157,600	6,838,295
Gasoline	145,178	20,740	254,513	36,359	4,455,415	2,768,759
Kerosene	.....	.....	.....	.....	166,870	244,136
Tops	.....	.....	79,120	26,373	559,664	128,986
Exports—						
Crude oil	187,698	26,814	132,858	18,980	3,382,200	1,467,481
Fuel and gas oil	766,617	109,517	420,752	60,108	10,447,897	9,121,203
Gasoline	32,022	4,575	.....	.....	3,105,283	2,298,831
Tops	.....	.....	.....	.....	.....	170,407
Kerosene	71,777	10,254	94,496	13,500	1,282,848	1,355,521
TANKER SHIPMENTS FROM SAN FRANCISCO TO ATLANTIC, GULF COAST PORTS						
Fuel and gas oil	82,701	11,814	78,296	11,185	811,798	218,414
Gasoline	.....	.....	93,142	13,306	685,236	870,601
Tops	.....	.....	.....	.....	229,775	794,918
Lubricants	.....	.....	58,470	8,353	275,617	235,533
Coastwise—						
Fuel and gas oil	124,998	17,857	48,567	6,938	2,821,109	2,204,090
Gasoline	115,436	16,491	133,560	19,080	2,663,860	1,522,288
Kerosene	21,998	3,143	20,135	2,877	267,044	128,104
Exports—						
Fuel and gas oil	.....	.....	104,405	14,915	1,935,617	1,347,931
Gasoline	80,167	11,452	.....	.....	943,747	417,581
Kerosene	.....	.....	.....	.....	1,252,123	663,465
Lubricants	.....	.....	.....	.....	.....	243,429

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UNFILTERED OILS

Grade	A.P.I. Gravity	Open Flash	Fire	Viscosity, Saybolt @ 100° F.	Pour Test	ASTM Color	Carbon Residue
100 Pale	20/22	300/310	345/355	100	0° F.	2	0.02
200 "	19/21	325/335	370/380	200	0° F.	2½	0.05
300 "	18/20	340/350	390/400	300	0° F.	2½-3	0.05
500 "	17/20	360/370	410/425	500	0° F.	3-3½	0.06
750 "	16/18	370/380	425/435	750	0° F.	3-3½	0.08
1200 "	16/18	380/390	435/445	1200	10° F.	3½-4	0.10
2500 "	15/17	390/400	450/460	2500	20° F.	3½-4	0.15
200 Red	19/21	325/335	370/380	200	0° F.	5-6	0.05
300 "	18/20	340/350	390/400	300	0° F.	5-6	0.05
500 "	17/20	360/370	410/425	500	0° F.	5-6	0.06
750 "	16/18	370/380	425/435	750	0° F.	5-6	0.08
1200 "	16/18	380/390	435/445	1200	10° F.	5-6	0.10
2500 "	15/17	390/400	450/460	2500	20° F.	5-6	0.15

FILTERED OILS

Grade	A.P.I. Gravity	Open Flash	Fire	Viscosity, Saybolt @ 100° F.	Pour Test	ASTM Color	Carbon Residue
200 Pale	19/21	325/335	370/380	200	0° F.	2½	0.04
300 "	18/20	340/350	390/400	300	0° F.	2½	0.03
500 "	17/20	360/370	410/425	500	0° F.	2½	0.06
750 "	16/18	370/380	425/435	750	0° F.	2½-3	0.08
1200 "	16/18	380/390	435/445	1200	10° F.	3-3½	0.09
2500 "	15/17	390/400	450/460	2500	20° F.	3-3½	0.13
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Southwest Indiana's New Pool Gains

Two Completions in Oakland Field over 150 Bbls. Biglick Township, Hancock County, Ohio, Springs Surprise

By Whit
Staff Correspondent, Central West Fields

FINDLAY, Ohio., Aug. 6—In the Central West Field proper, north of the Ohio River, the week's report shows a total of 31 completions, 7 being dry holes and 6 gas wells, leaving 18 oil wells with an initial production of 655 bbls., or an average per well of close to 36½ bbls. The bulk of the new production comes from wells in Indiana, mostly in the southwestern part of the State. The Lima Field of northwestern Ohio showed an excellent average per well while Illinois was off in its usually large production as no real completions were made in the Allendale Field of Wabash County. Central Ohio had one good oil well, with some nice gas producers.

The finding of a 60-bbl. natural producer in Biglick Township, Hancock County, in the Lima Field, was somewhat of a surprise for nothing was looked for in that area of that size.

Indiana's good producer came from the new recently opened pool in Logan Township, Pike County, where a second test on the Walter Miley farm, had an an initial production of 150 bbls. and No. 1 on the church lot, in the same field enriched the church, the well having an initial production of 153 bbls. the first 24 hours. The old Trenton Rock end of the State is well represented in a well drilled on the Bollenbecker farm, in Jefferson Township, Adams County, with an initial of 75 bbls. In Wabash Township, same county, a test on the Hawbacker farm, is reported at 20 bbls. initial output and adding a considerable area for further development.

A little in advance of production in the Allendale Field, Wabash Township, Wabash County, Illinois, a well is making a nice showing on the W. O. Johnson farm, Section 6. North of the big farm of Mack Madden and a couple locations northeast of a producer on the S. J. Stillwell farm a test is reported making a showing which will cause more drilling toward the northeast of the discovery well on the Stillwell farm.

Lima Field

Development work in the old Lima Field of northwestern Ohio had been held up by a scarcity of water for drilling purposes but a continuous all day rain proved an incentive to more active work and numerous wells will be started that were held up by a water famine. This has been universal over most of the Central West Field, even across the Ohio River into Kentucky.

One of the important finds of the week in the Lima Field was made by the Ridge Oil & Gas Syndicate, 650 feet from the south line and 210 feet from the west line of the Elnora Cross farm, better known as the Jackson Stahl farm, in the northwest quarter of Section 35, Biglick Township, Hancock County. The well tapped the top of the Trenton sand at 1,370 feet and drilled 69 feet in the sand to a total depth of 1.439 feet. where it produced 60 bbls. natural the first 24 hours, making it the best well found in that township for quite a number of years. It means much for the future of the territory located not far distant from the Wyandot County line where a recently 40-bbl. initial well was drilled in by the South Bend Producers Co. in Ridge Township.

In Perrysburg Township, Wood County, the Oko Oil & Gas Co.'s No. 5 in the northeast corner of the Louisa DeVerna farm, in the southeast quarter of Section 29, showed an initial of 14 bbls., with sand topped at 1,242 feet and oil 50 feet in the sand. This pool, which was opened something like a year ago is showing some nice average wells and adds quite a large producing area to the famous old Wood County producing area. In Lake Township, same county, Lantz, Schulte and others' second well, 600 feet from the north line and 175 feet from the south line of the Fred Berndt farm, in the southwest quarter of Section 26, near Lachta, showed but 1 bbl. the first 24 hours' pumping. Sand was struck at 1,273 feet and drilled 40 feet in the sand.

Southwest of Findlay, in Eagle Township, Hancock County, J. M. Steen and others' No. 24 in the northeast corner of the M. H. Deeds farm, in the southwest quarter of Section 6, showed a first 24 hours' pumping of 20 bbls., with top of Trenton at 1,315 feet and total depth of hole 1,390 feet. In Union Township, same county, Harpst Brothers' No. 9 well, 600 feet from the north line and 300 feet from the east line, had an initial output of 10 bbls. Sand at 1,305 feet and drilled 75 feet in the sand.

Near Lindsay, in Washington Township, Sandusky County, the Ohio Oil Co.'s No. 10 well, 700 feet from the south line and 200 feet from the east line of the John H. Meyers farm, Section 30. pumped an initial production of 10 bbls. at 120 feet in the sand, the top of sand being found at 1,267 feet and bottom of hole 1,387 feet.

Stelzer & Boyd drilled a test in the southeast corner of the John U. Kennedy farm, on the oil map as the T. W. Murine farm, in the northeast quarter of Section 36, Union Township, Mercer County, which produced initial but 2 bbls, while not large, it shows that a slight extension has been added to the producing territory. Sand was found at 1,144 feet and oil at 53 feet in the sand. In Center Township, in the Mendon Field, same county, Drake and others' test in the southeast corner of the George Bollinger farm, mapped as the Justis Hamilton farm, in the northwest quarter of Section 5, pumped 3 bbls. and adds a little additional territory to the Mendon Field. Sand was topped at 1,130 feet and drilled 45 feet in the sand.

Indiana

Indiana is gaining in its popularity as an oil producing state after many years of quietude and the work of developing new producing areas has just begun. The latest sensation is the good wells being found in the new extension to the Oakland City Field, in Logan Township, Pike County, in the southwestern part of the State. The best of the new wells was drilled by J. Morsey on the Olive Branch Church lot, with J. S. Wilson, trustee, in the southeast corner of the lot, in the northeast quarter of Section 14. The initial 24 hours' gauge of the wells showed 153 bbls., and should bring some good revenue to the church. In the same section Henry Skidmore and others' No. 2 in the northeast corner of the Walter Miley farm, in the same quarter section, showed a 24-hour gauge of 150 bbls., making that pool look the richest now opened in the Hoosier Field. The Wiser Oil Co. is drilling a well just 400 feet east of the big well found by Skidmore interest and on the Erma G. Wilson farm. Operators in the new extension believe a nice production will be found in the new area. In Clay Township, same county, the Murphy Oil Co.'s No. 5 well, 175 feet from the south line and 925 feet from the west line of the Stewart Brothers farm, in the southwest quarter of Section 13, is not as large as the former wells, as its first 24 hours' production amounted to but 2 bbls. Top of sand was at 168 feet and drilled 19 feet in the sand. No. 6, same farm, is drilling and A. B. Bement is drilling No. 1 on the Charles McAtee farm, same section.

Leasers have been working in southern Indiana, as Edwin T. Murray of Saltsburg, Pa., has left for record a block of 1.230 acres located in Carter, Clay and Jackson Townships, of Spencer County, in the vicinity of Rockport.

Eastern Indiana

Another good find is reported from the old Trenton Rock area of eastern Indiana, in a test drilled by W. E. McKelvy of Pittsburgh, Pa., and J. S. Randall of Cleveland, Ohio, on the William Bollenbecker farm, known on the map as the old Alfred Elliott farm, Section 6, Jefferson Township, Adams County and 5 miles east of the oil town of Berne. The well struck top of Trenton at 1,096 feet and went 40 feet in the sand and is reported a natural producer good for 75 bbls. initial and does not require a shot to bring in its production. No. 2, same farm, will be started at once.

A large number of wells are being pumped daily in the Berne area and the settled production varies from 3 or 4 bbls. upward. Before the Bollenbecker well was struck the J. H. Harmon and others' well on the Niblick farm, 4 miles east of Berne, held the record. It has been pumping 50 or more bbls. per day and it was the banner well until the last one drilled by McKelvy and Randall. No. 1 on the Sipe farm is producing between 10 and 12 bbls. daily. George S. Lacknett, of Pittsburgh, Pa., is starting No. 2 same farm. This is in Section 27, Blue Creek Township, also in Adams County. In the same township, Schulte, Haney and others are drilling No. 7 on the Schulte farm, Section 6. No. 6 on this farm had an initial output the first 24 hours of 15 bbls. This well has a good gas showing with its oil. Harmon & Watts are drilling No. 6 on the Mary J. Niblick 242 acres, Section 6, Jefferson Township. and should reach the sand within several days.

A deep test well will be drilled in the Hotmier Pool in the southern part of Jay County, on the Hotmier farm upon which the discovery well of the pool was drilled a few years ago. The drilling will be done by Christman, of Selma, Ind. One of the natural flowing wells in this pool will be selected as the deep test and will be drilled 400 feet into the Trenton Rock. Oil operators who know this field believe a deep test well will strike a lower and larger pay than was found higher up in the sand. Wells drilled in at greater depths farther west, in Randolph and Delaware Counties, tapped this pool and wells with initial production ranging from 100 to 1,000 bbls. were the result.

(Continued on Page 77)

EIGHTEEN DRILLING AT SAGINAW NOT COUNTING MANY WILDCATS

By Whit

SAGINAW, Mich., Aug. 6.—The present producing area of the Saginaw Oil Field is located to the north and northwest of the city of Saginaw, covering an area about 1½ miles east and west and approximately a mile north and south. There are 17 completions, one being dry, and 16 are producing wells with 18 wells drilling up to and including July 28, not including numerous wildcat ventures east, south and west, such as the Gordon Petroleum Co., Wanigas Oil Co., Charles Murrin and other tests.

The completed and drilling wells are numbered from 1 to 34, with name of owners and the correct number of well as follows:

No.	Owner—	Well No.
1	Saginaw Prospecting Co.	1
2	Saginaw Prospecting Co.	2
3	Saginaw Prospecting Co.	3
4	Saginaw Prospecting Co.	4
5	Saginaw Prospecting Co.	5
6	Saginaw Prospecting Co.	6
7	Saginaw Prospecting Co.	7
8	Saginaw Prospecting Co.	8
9	Saginaw Prospecting Co.	11
10	Saginaw Prospecting Co.	9
11	Saginaw Prospecting Co.	10
12	Saginaw Prospecting Co.	12
13	Saginaw Prospecting Co.	13
14	Bliss Pet. Co., Ulrich farm	1
15	Bliss Pet. Co., Boldebuck	1
16	Bliss Pet. Co., Engel	1
17	Bliss Pet. Co., Ulrich	2
18	Sun Oil Co., Weiss	1
19	Sun Oil Co., Schoenheit	1
20	Sun Oil Co., Nuerminger	1
21	Sun Oil Co., Schoenheit	2
22	Sun Oil Co., Stelzriefe	1
23	Ohio Oil Co., Mershon-Eddy-Parker	1
24	Saginaw City Bldg. Co., Householder	1
25	V. M. Vorhees & McNally, Ulrich	1
26	Myron E. Lee, Brechtelsbauer	1
27	W. D. Bergherm, Winter	1
28	V. M. Vorhees & Co., Marshall	1
29	J. H. Shaltry & Co., Pagel	1
30	Charles P. Brandt, Walker	1
31	Valley O. & G. Co., Graham-Mertz	1
32	Superior Oil Co., John Spatz	1
33	J. H. Shaltry & Co., Reinhart	1
34	Ohio Fuel Corp., Fisher	1

Latest Producers

Three new wells were drilled into the Berea sand in the Saginaw Field proper late last week as already reported in The Oil and Gas Journal. The most important of the three was the Ohio Fuel Corp.'s No. 1 on the Ernest Fisher farm in the northwest quarter of the southwest quarter of Section 11, Saginaw Township, and the farthest north producer in the field, being a little over one-half mile west and about one-quarter of a mile north of the Sun Oil Co.'s No. 1 on the Nuerminger farm, which up to the completion of this well was the most northerly well in the field outside of the dry hole of the Bliss Petroleum Co. on the Boldebuck farm. The Fisher farm well struck the top of the Berea sand at 1,830 feet and then stood over night when it was drilled 8 feet in with a very fair showing. This well extends the field at least a half mile northwest of the nearest production, giving many almost sure locations to drill between. This made the sixteenth producer for the field out of 17 completions, the only dry hole being the Boldebuck well.

The Saginaw Prospecting Co.'s No. 1 on the Martin Hanson farm on the Hermansau road, and right close to production, struck top of the Berea at 1,817 feet and drilled 10 feet in where it was given a shot and filled up with about 500 feet of fluid over night, making a very good showing.

The Sun Oil Co.'s No. 1 well on the John Schonheit farm, just south of the same company's No. 1 producer on the Weiss farm, after being shot and allowed to stand for a day, filled up with 750 feet of fluid while the Fisher well of the Ohio Fuel Corp. after being shot and standing for a day and a half, showed 900 feet of fluid in the hole. The Sun Oil Co.'s Schonheit well struck top of the Berea at 1,825 feet and drilled 9 feet in the sand.

The fact that the important wildcat

(Continued on Page 109)

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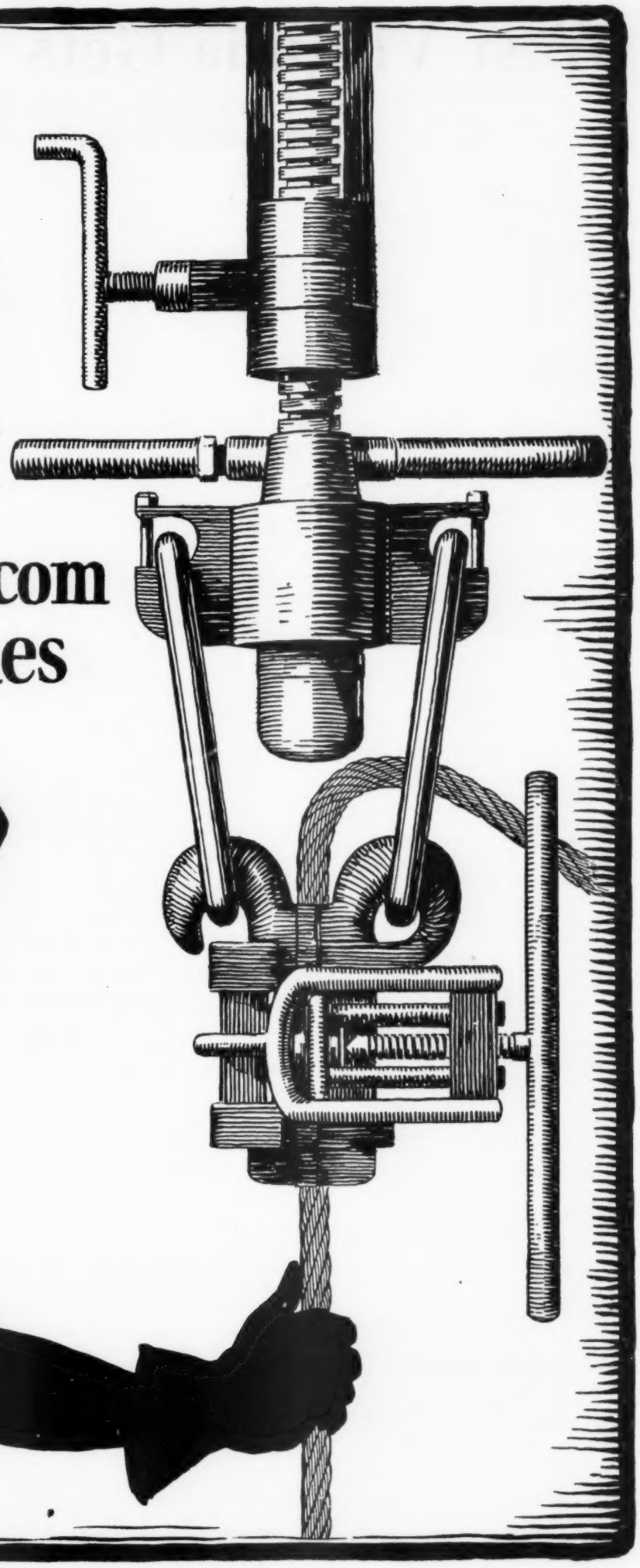


K854

West Virginia Gets New Production

Grant District, Ritchie County, Harvey District, in Mingo County, Henry District, Clay County, in Development

By D. S. Wakenight
Staff Correspondent, Eastern Fields

PITTSBURGH, Pa., Aug. 9.—Operations in the southwest Pennsylvania, West Virginia and southeastern Ohio fields for the past month show a decided improvement over July a year ago when 234 wells were completed and the new production amounted to 1,297 bbls. For the past month there were 213 completions and the new production amounted to 2,342 bbls. In other words, fewer wells were completed in this July and the new production was 1,045 bbls. more than for the same month last year.

During the year some new pools have been discovered and have called out new work. The most important of the new discoveries is the Big Injun sand pool in Henry district, Clay County, West Virginia. Grant district, Ritchie County, also has a new producing streak that is furnishing some very good producers. Recently Harvey district in Mingo County has been trying for recognition.

No new pools have been discovered in southeastern Ohio. The deep sand territory continues to feature operations in that section and will gain more attention when the market advances to a point that will make it profitable to drill. There is still room for a large amount of work in several counties.

Best Producers for Week

The feature of the week in development work was the drilling deeper of an old well in Morris Township, Greene County. It is the Carnegie Natural Gas Co.'s first test on the James S. Rutan farm. The first 24 hours after the second pay was struck it produced 425 bbls. and was holding up at 170 bbls. a day at the close of the week.

On Dry Ridge, Grant district, Ritchie County, old territory, the Astron Oil Co. was surprised when it drilled into the Big Injun sand its No. 4 on the Herman Stursburg Realty Co.'s property. The well produced 125 bbls. the first 24 hours.

Southeastern Ohio did not make the usual good showing during the week. Fewer wells were completed and there was a scarcity of good producers.

Where Production Is Increasing

There are but two sections in the eastern fields in which the production is increasing. In Henry district, Clay County, West Virginia, the production of the new pool is now very close to 1,500 bbls. a day and with the wells now drilling near the sand should show a still further increase. By some it is estimated production will reach 2,500 bbls. a day.

The Gordon sand pool in Morris Township, Greene County, is expected to show a considerable increase in production. It has now reached close to 800 bbls. a day.

West Virginia

In Union district, Ritchie County, the Hope Natural Gas Co. has completed No. 4 on the L. M. Ehret farm. It is a gasser in the Big Injun sand. In the same district, the Pittsburgh & West Virginia Gas Co.'s test on the Eli Nutter farm is a gasser in the same formation.

Far removed from production on the waters of Whites Creek, Union district, Wayne County, the Chartiers Oil Co. has completed a test on the Ella McGee farm. It is showing for a 3-bbl. pumper in the Berea grit. The location is 900 feet north of the same company's test on the Pauline Millander farm. On the waters of Rocky Step Run, Scott district, Putnam County, Kirtley & Keller have the rig completed for a test on the C. L. Sanders farm, 2,000 feet northeast of their test on the Jennis Jones farm. On the same stream and district, Thompson Shannon and others have the rig completed for a test on the Parker Schoolhouse lot.

Clay County

In Henry district, Clay County, the Virginian Gasoline & Oil Co. has completed No. 11 on the Brown, Goshorn, Swan & Sinnett lease. It is estimated good for 20 bbls. a day in the Big Injun sand. In the same district, the same company has completed No. 14 on the Brown, Swan, Goshorn & Geary lease in the same formation, good for 15 bbls. a day.

The Virginian Gasoline & Oil Co. has completed in the Big Injun sand No. 13 on the J. B. Casto 260 acres, showing for a 20-bbl. producer. There are six or eight wells due to get the sand in this development within the next week.

On Elk River, one-half mile north of the Davis Oil Co.'s second test on the Harvey Samples farm, in Union district, Clay County, the Eastern Carbon Black Co. has completed in the Big Injun sand a second test on the Bratton Samples farm. It is a gasser good for 230,000 feet a day.

On Fink Creek, Freemans Creek district, Lewis County, the Philadelphia Gas Co. has the rig completed for a test on the C. D. Brannon farm. In Sheridan district, Calhoun County, Godfrey L. Cabot has a rig completed on the B. B. Ferrell farm. In Grant district, Pleasants County, the New York Petroleum Co. has started to drill on the Hendricks home farm.

Dusters in Gilmer County

In DeKalb district, Gilmer County, the Philadelphia Oil Co. has completed in the Big Injun sand No. 4 on the D. Stalnaker form. It is a duster. In the same district and formation, McCall & Co. completed a test on the Jerusha Stalnaker farm and dry. The location is 2,000 feet of the Philadelphia Oil Co.'s first test on the D. Stalnaker farm. In the same locality, the Philadelphia Oil Co. completed in the Maxon sand No. 5 on the D. Stalnaker farm, good for 350,000 feet of gas and a half barrel of oil.

Located 500 feet east of the first test on the M. A. C. Board farm, Sherman district, Calhoun County, the Euclid Oil & Gas Co. has completed in the Big Injun sand No. 3. It is a light gasser.

Fair Producer in Ritchie

On Meadow Run of Goose Creek, Grant district, Ritchie County, the South Penn Oil Co. has completed and shot in the Big Injun sand No. 3 an the Malinda Jamieson farm, good for 25 bbls. a day.

In Liberty district, Marshall County, the Carnegie Natural Gas Co. has a duster in all sands at No. 7 on the Thomas Conway farm. In the same district, Edmund Conway and others have the rig completed for a test on the Mary Campbell farm. In New Milton district, Doddridge County, Trainer & Travis have a 3-bbl. pumper in the Big Injun sand at a test on the C. L. Ford farm. In West Union district, the Clifton Oil & Gas Co. has a gasser in the same formation at a second test on the Joseph Smith farm.

In DeKalb district, Gilmer County, Snyder & Deems are now through the Big Injun sand at a test on the J. A. Cain farm. Nothing was found in the Big Injun sand, but a light show of oil was developed in the Maxon sand. It will be given a test. In Burning Springs district, Wirt County, Roberts Brothers have a light pumper at their No. 146 on the Rathbone Oil tract. In Williams district, Wood County, D. E. McClure has a duster at a second test on the Rosie Northorp farm.

Doddridge County

In McClelland district, Doddridge County, the Mack Bell Oil & Gas Co. has completed in the Big Injun sand a test on the Pratt-Roberts farm good for 7 bbls. a day. On Rush Run, Smithfield district, Roane County, Godfrey L. Cabot has drilled a second test on the W. H. Haless farm. It is a fair gasser, 1,100 feet northwest of No. 1 on the same farm.

In McKim district, Pleasants County, the Delong Farm Oil & Gas Co. completed and shot in the Cow Run sand No. 3 on the Rebecca and C. C. Delong farm. It will make a 3-bbl. pumper. In Clay district, Monongalia County, the gas having been exhausted in the South Penn Oil Co.'s second test on the Noah Brewer farm, it was cleaned out and is producing 2 bbls. a day from the fifth sand.

West Virginia had few completions at the close of the week. In Proctor district, Wetzel County, the Proctor District Oil & Gas Co. completed and shot in the Gordon sand its test on the Jack O'Neill farm. It is a very light pumper. On Indian Creek, McElroy district, Tyler County, the American Oil Development has completed No. 15 on the Stephen Pott farm. It is dry in the Maxon sand.

Wood County

The Jonas & Park Oil Co. completed in the Big Injun sand a test on the Harry Brum farm, in Walker district, Wood County. It is a duster. In the Big Run Field, Williams district, the Big Run Oil Co. has completed in the first Cow Run sand No. 4 on the William F. Harris farm. It is also a duster.

On Little Paw Paw Creek, Paw Paw district, Marion County, the Owens Bottle & Machine Co. has drilled a test on the Charles Toothman farm through the fifth sand and dry in that formation. They filled back to the Big Injun sand and gave it a shot. It is showing for a 5-bbl. pumper.

On Little Sandy Creek, Elk district, Kanawha County, the United Fuel Gas Co. drilled its test on the Rebecca Fogarty farm through the Big Injun sand and found nothing. On Poca Fork of Big Sandy Creek, Big Sandy district, same county, the same company has a fair gasser in the Big Injun sand at a test on the R. W. King farm.

Light Gasser in Upshur

In Washington district, Upshur County, the Edgell Oil & Gas Co. has completed a wildcat on the C. Willfong farm. It is a very light gasser in the Big Injun sand. On Ash Lick Run, Burning Springs district, Wirt County, the Southern Oil Co. has drilled through the Big Injun sand a test on the Dewees heirs' farm. It is a small gasser.

Ritchie County

On McFarlan Creek, Murphy district, Ritchie County, J. F. Deem and others have completed in the Big Injun sand a test on the W. H. Pierpont farm not good for more than 2 bbls. a day. On the same stream and district, the Hardwick Farm Oil Co. has completed a second test on the Charles Hardwick farm. It is a duster in the same formation and has been abandoned. In New Milton district, Doddridge County, J. B. Travis has the rig completed for a test on the L. W. Robinson farm.

Tests Drilling and Starting

In Central district, Doddridge County, the Parkersburg Oil & Gas Co. is hauling rig material to a location on the Leroy Ingram farm. In the same district, Nay & Kintzer are due in the Big Injun sand at location on the F. P. Dotson farm. In Jefferson district, Lincoln County, the Cambridge Gas Co. is due in the Big Injun sand at tests on the Horde Creek Land & Mining Co.'s tract and H. H. Wade farm. In the same district, the Columbia Gas & Electric Co. is due in the same formation at a second test on the Horse Creek Land & Mining Co.'s property. In Union district, the same company is due in the Big

(Continued on Page 79)

OWENSBORO FIELD LEADS KENTUCKY; WILDCAT STARTED IN MISSISSIPPI

By Whit
Staff Correspondent, Kentucky-Tennessee

OWENSBORO, Ky., Aug. 8. — Now that there has been a splendid rain throughout most of Kentucky, work may pick up, as many wells were shut down on account of a shortage of water, which made the week one of little activity with a heavy slump from that of the previous week. The eastern division reported only one completion, the balance coming from the western part of the state.

Barren County and the Owensboro fields are leading in new work and will no doubt maintain the lead as the production is found at shallow depths and it does not require many days drilling to bring in a well less than 800 feet in depth.

The best completion reported in the eastern division of Kentucky was a 25 bbl. producer on the Spencer heirs farm, in District 6 of Wolfe County. In the western division a 25-bbl. producer was found on the Lucinda Crowe farm, Owensboro district, and in the Knob Road district of Barren County the test on the Dauter Brothers farm shows equally as good.

In the Kentucky end of the field a total of 15 wells were completed with a production of 178 bbls., all being producers ranging from 1 to 25 bbls. This is a decrease from the previous week of 21 completions, 21 less producers, 8 less dry holes, 2 less gas wells and 211 bbls. less new production. These wells were distributed among the various counties and districts as follows:

	Comp.	Wells	Prod. Prod.	Dry	Gas
Owensboro	6	6	77	0	0
Barren	4	4	65	0	0
Allen	2	2	8	0	0
Warren	2	2	3	0	0
Wolfe	1	1	25	0	0
Total	15	15	178	0	0
Last week	46	36	389	8	2
Difference	31	21	211	8	2

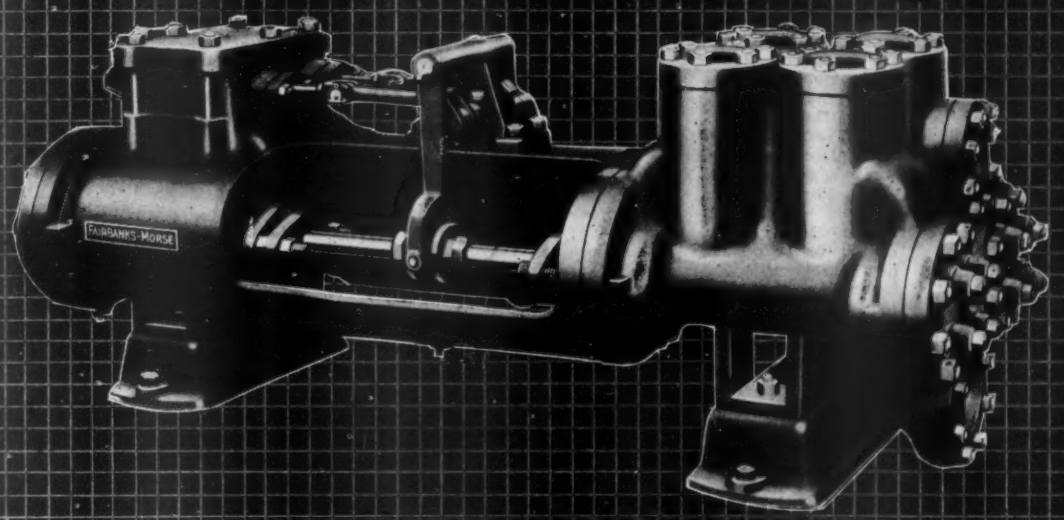
Mississippi Wildcat

Unknown parties are drilling a wildcat well in Section 36-3-12 of Stone County, Mississippi, about 30 miles north of the city of Gulfport. The drilling is in charge of Jack Mobley, who drilled the test at Forrest, Miss., last year. At the new venture there is a standard rig and a string of rotary tools and at last report the well was drilling around the depth of 1,000 feet. The rig and tools are such that if necessary the well can go to a depth of 5,000 feet, the mark put by the owners, according to advice from Gulfport. E. M. Barber of Gulfport, Miss., formerly an oil operator in the Kentucky Field, has secured some acreage near the

(Continued on Page 109)

FAIRBANKS-MORSE

Oil-Field-Line Pumps



FAIRBANKS-MORSE OIL-FIELD-LINE PUMPS (steam or power driven), were designed especially for handling crude oil in gathering lines, in pressures up to 1000 pounds. They are also suitable for pumping water and other liquids at high pressures.

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CONTINENTAL

Natural Gas Developments

TIONESTA GAS BUYS PROPER NATURAL GAS

TIONESTA, Pa., July 31.—J. B. Forker of Oil City, Pa., part owner of the Tionesta Gas Co., has concluded a deal to transfer the lines and leases of the Proper Natural gas Co. in Tionesta and vicinity to the Tionesta Gas Co. The Forker interests supply gas to Tionesta borough and vicinity.

The production of gas owned by the Proper Co. will be turned into the lines of the Tionesta company and the business will thereafter be operated under the name of the latter. The Proper Gas Co. was owned by the late Lewis Emery of Bradford who purchased all the interests a short time before his death. The sale of the property at this time is in line with a policy adopted by his heirs to close out all their outlying business and confine themselves to the Bradford Field and McKean County in so far as the production of oil and gas is concerned.

This transfer will insure the Tionesta Co. an ample supply of gas and make it possible for them to supply their patrons without running the pumps except in the coldest months.

The Tionesta company had also purchased the gas production from the two wells drilled on the lease of the Oil City Drilling Co., of the Proper, Agnew and Jamieson lands in Tionesta Township, known as Bunker Hill.

The consideration is not made known in either purchase.

GAS LINE TO DENVER WAITS DEVELOPMENTS

DENVER, Colo., Aug. 7.—Final plans for the construction of a 300-mile gas line from the Amarillo gas fields to Denver at a cost of $10,000,000 to $12,000,000 may be completed within ten days, it was stated on the return of M. B. Young, vice president of the company, to Denver. Mr. Young will remain here pending receipt of final word on the project from New York.

Plans for the pipeline also include the proposals to link Pueblo, Colorado Springs and other southern Colorado towns with the new line. It is estimated that the supply of gas available at Amarillo is sufficient to supply Denver for 50 years, taking into consideration the city's future growth.

Consummation of the plans is said to have been delayed by the possibility of discovering a gas field closer to Denver, in which case the company would be forced either to abandon its line and develop the closer field or face competition from another company bringing gas into the city with a much smaller amount of capital invested.

Another development of the situation was revealed when it was announced that several other interests were looking to the possibilities of linking Denver with the Texas gas fields. Confirmation of the reports are lacking, as those interested refuse to admit they are contemplating any such action.

COLUMBIA CARBON CO.

Columbian Carbon Co. and subsidiaries for quarter ended June 30, 1926, report net income of $688,878 after taxes, depreciation and depletion, equivalent to $1.72 a share earned on 402,131 shares of no par stock. This compares with $694,882 or $1.72 a share in preceding quarter and $524,935 or $1.30 a share in second quarter of 1925.

Net income for first half of 1926 totaled $1,383,760, equal to $3.44 a share, against $1,085,353 or $2.69 a share in first half of previous year.

CARBON BLACK FIGHT BITTER IN THE WASKOM GAS TERRITORY

SHREVEPORT, La., Aug. 7.—Unrelenting in their efforts, newspapers and interested persons in north Louisiana and east Texas, are waging a stubborn fight to have the state administration of Louisiana revoke a permit issued to the Owl Oil Co. to build a carbon black plant in the Waskom gas field. The Waskom Field is located in both states and divided by the state line.

The most significant development during the past week was the request of the head of the Texas Railroad Commission for a conference with Dr. V. K. Irion, head of the Louisiana Conservation Commission. Each are responsible for the issuance of such permits in their respective states. It is reported the Texas commission head will request the revocation of the permit.

The permit was issued several weeks ago. Doctor Irion claims the permit was issued to give the Owl company the opportunity to experiment in manufacturing rock gas or luminal. The company may use 12,000,000 feet of gas daily, according to the permit and burn the residue. Shreveport's city chemist contends luminal has been made here for years and that after the Owl company had extracted the natural gasoline and luminal from the gas it would have 97 per cent to burn in its carbon black plant.

A mass meeting followed the announcement of the issuance of the permit and resolutions were passed calling upon the governor or Doctor Irion to revoke the permit. Since then the state political leaders have been under the fire of newspapers demanding the revocation of the permit.

One newspaper demands the revocal of the permit to save the State's honor. That paper pointed out that carbon interests were about to enter the Waskom Field from the Texas side several years ago and Louisiana appealed to Texas not to issue a permit for the erection of a carbon plant in that field. North Louisiana at the time promised that no carbon plants would be erected on the Louisiana side of the field.

State officials have been silent concerning the permit but have promised a statement would be issued soon.

On the same day the meeting of protest was held in Shreveport a charter was filed for the Pelican Oil & Gasolien Co. authorizing it to manufacture carbon black. The president of the Owl Oil Co. at the time the permit was granted appears as president of the Pelican Oil & Gasoline Co.

The Pelican is chartered with an authorized capital of $100,000, representing 1,000 shares at $100 par, with authority to increase same to $1,000,000. The incorporators appearing in the charter are Alfred C. Glassell, president, owner of 495 acres; Ashton Glassell, vice president, one share and A. R. Curry, secretary-treasurer, 10 shares. That paragraph of the charter setting forth the powers of the company, says:

"——And especially to purchase, build, construct, own and sell carbon plants and gasoline plants for the purpose of manufacturing carbon, gas and gasoline," etc.

Whether this is the concern reported planning to send to Austin to obtain a permit from the Texas Railroad Commission, for a plant on the Texas side of the state line in the Waskom gas field is not known.

"The people of north Louisiana need have no fear that the carbon interests will slip to Austin and get a permit to manufacture carbon black on the Texas side of the line," declared Byran Blalock, secretary of the local chamber of commerce.

"The Railroad Commission of Texas has absolute jurisdiction in Texas, and that body upon many occasions has refused to grant permits for the manufacture of carbon black from natural gas in Texas gas fields. Many requests for permits in the Amarillo Field have been refused. The danger would arise, should Louisiana permit a carbon plant to be built at Greenwood, which would get a part or all of its gas on the Texas side. Should this condition arise, and the recent permit to the Owl company does that very thing, then the Texas legislature, which meets in January, could hardly be expected to refuse a bill keeping out carbon plants when Texas gas was being piped across the line. We were only able to defeat the bill three years ago because of protests from north Louisiana that no carbon plants were using gas from the state line. Texarkana, Marshall, Atlanta, Tyler, Longview, Beaumont and Port Arthur are some of the Texas cities that will be directly affected. At least 400,000 people would have their fuel supply jeopardized. There are at least 100,000 meters in the towns getting gas out of Waskom area. This would entail an expenditure of $10,000,000 to change from gas to wood and coal stoves. This would almost destroy the prosperity of east Texas and north Louisiana for years."

CARBON BLACK OUTPUT IS FIVE PER CENT LESS

The production of carbon black in the United States in 1925 amounted to 177,417,378 pounds, according to reports made to the Bureau of Mines, from 63 plants operating in eight States. This production is a decrease of 9,454,656 pounds, or 5 per cent, from the total output reported in 1924, and marks the first decline in yearly production of carbon black since 1920. On the other hand, deliveries to consumers in 1925 were higher than ever before, the total for the year, 175,631,326 pounds, being an increase over 1924 of 36 per cent. This large increase in indicated consumption, despite the decline in production, resulted from a radical change in the situation as regards stocks, which were largely increased in 1924 but which remained steady in 1925.

Although the carbon black industry bettered its position as regards stocks of carbon black in 1925, there was no favorable reaction as to price, which reached a new low level of 5.4 cents as the average per pound at the plant. This compares with 6.2 cents in 1924.

As has been the case for every year since 1921, Louisiana was the leading carbon black producing State, its output in 1925 of nearly 130,000,000 pounds comprising 73 per cent of the total for the country. Declines of 28 per cent in both West Virginia and Kentucky were recorded in 1925. These declines resulted in the main from a decreased supply of gas, which at the same time became more valuable for other purposes. Perhaps the outstanding event of the year as regards the production of carbon black was the rise to prominence of Texas, which displaced West Virginia as the second most important producing State.

It is estimated that 140,000,000,000 feet of natural gas was burned for carbon black in 1925 and the average recovery per thousand feet was, therefore, 1.3 pounds, an increase over 1924. While there is a growing tendency in most producing areas to restrict the supply of natural gas for carbon black, production has not fallen off materially due to improvements in equipment or in operating methods. This has been particularly noticeable in the Monroe Field which supplies all the gas for Louisiana's output.

Exports of carbon black in 1925 amounted to 43,182,635 pounds, which is equivalent to nearly 25 per cent of the total production.

GAS LINES EXTENDED IN TEXAS COUNTIES

HOUSTON, Tex., Aug. 7.—The Houston Pipe Line Co., the natural gas subsidiary of the Houston Oil Co., has completed the work of laying mains in the city of Victoria to furnish natural gas to domestic and industrial consumers. The same company is also piping the town of Beeville, Bee County, for the same purpose.

The Houston Pipe Line Co. is laying 85 miles of 12 and 14-inch line as an extension of its trunk system. The extension is from Lucas Field in Live Oak County to Bruni and other gas districts in Duval and Webb Counties.

The Humble Pipe Line Co. has laid about 45 miles of its 8-inch line from Bruni tank farm, Duval County, eastward to Ingleside, near Corpus Christi. When completed the line will be 110 miles long. The Humble Oil & Refining Co. is erecting 12 steel tanks of 55,000 bbls. each at Bruni for storage purposes.

GAS LINE COMPLETED; BASTROP TO MER ROUGE

SHREVEPORT, La., Aug. 7.—Center, Tex., is the latest town along the route of the Magnolia's 18-inch gas line from the Waskom Field to Beaumont, Tex., to draw gas from that line. Center is a few miles west of the line and Magnolia is running a small line into the town to supply gas for domestic and industrial purposes.

Texas-Louisiana Gas & Carbon Co., of Monroe, La., has completed a 7-mile, 4-inch gas line from Bastrop to Mer Rouge. Laterals are being laid in Mer Rouge and the gas system is expected to be in operation within the next 30 days.

LONE STAR GETS FRANCHISE

SHAMROCK, Tex., Aug. 7.—The Lone Star Gas Co.'s subsidiary, the Community Natural Gas Co., has been awarded a franchise at Vernon. The Upham Co. also has a franchise there through its subsidiary, the Northern Utilities Co. Each company may charge the same rate of 18 cents for domestic and 11 cents for industrial gas. The Upham Co.'s pipeline is being laid from the Shamrock Field to Vernon. The Lone Star's trunk line also is being laid.

CASINGHEAD GAS LINE

OKLAHOMA CITY, Okla., Aug. 7.—Application for an order exempting from the common carrier status of a pipeline in the Healdton Field has been made to the Corporation Commission by the Amerada Petroleum Corp. The line, which belongs to the Healdton Pipe Line Co., was leased recently by the Amerada Corp. and it is to serve that corporation only in transporting casinghead gas and other products of the corporation.

BUYS KENTUCKY WELLS

The Petroleum Exploration Co. has acquired from D. L. Johnson, of Lexington, Ky., three gas wells and about 800 acres in Owsley County, Kentucky. The new purchase increases the number of gas producers in Owsley County owned by Petroleum Exploration to 31.

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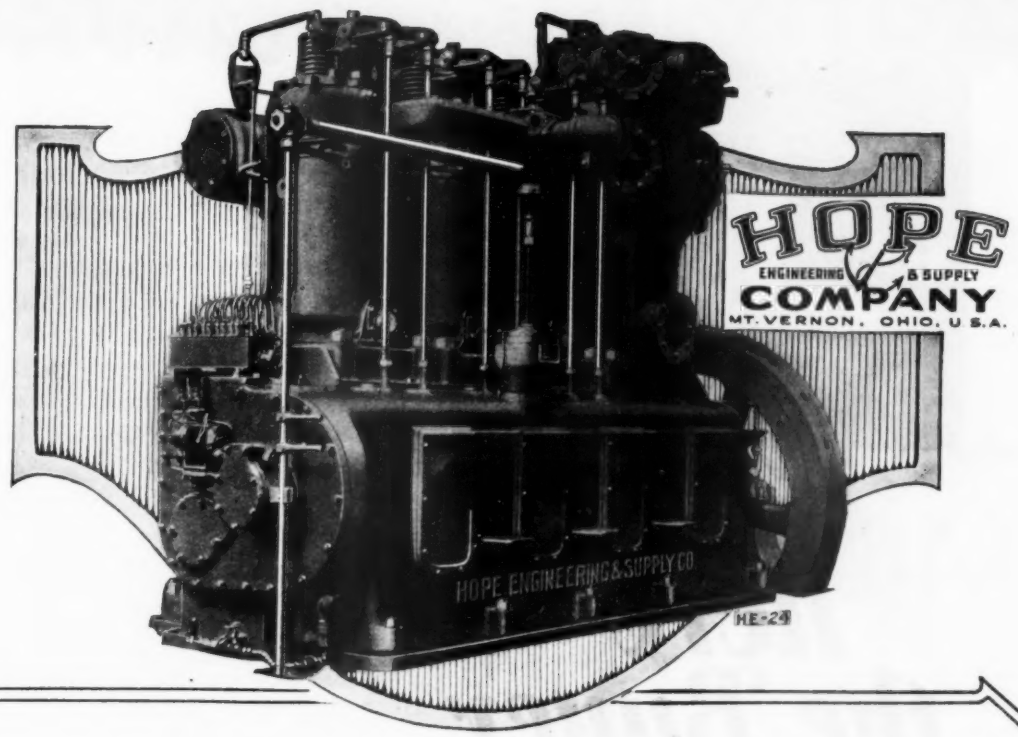

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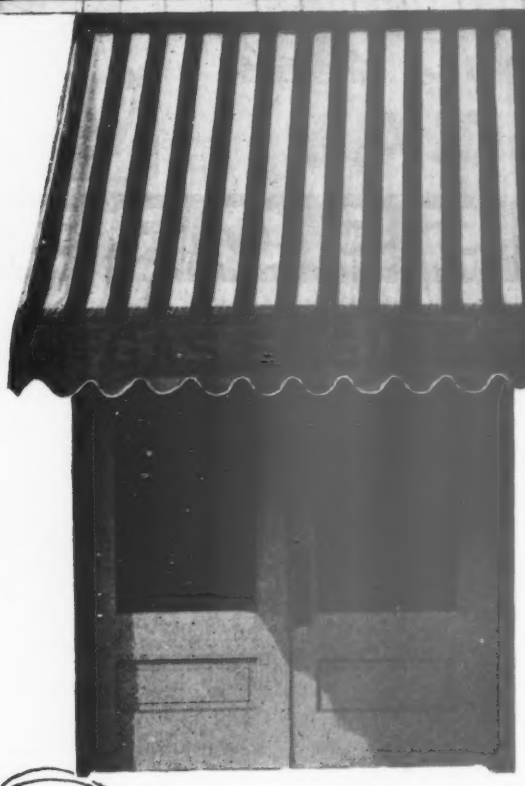

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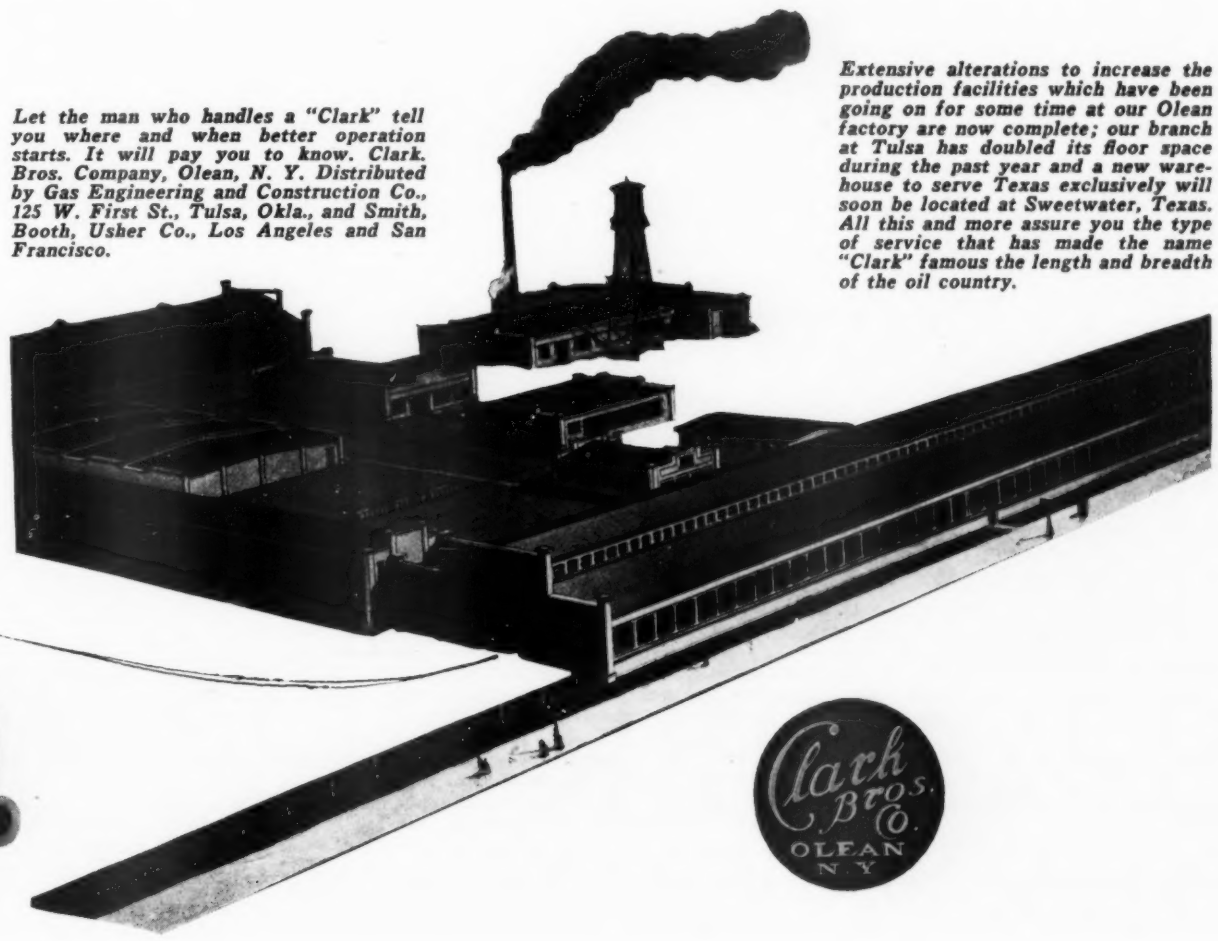
Extensive alterations to increase the production facilities which have been going on for some time at our Olean factory are now complete; our branch at Tulsa has doubled its floor space during the past year and a new warehouse to serve Texas exclusively will soon be located at Sweetwater, Texas. All this and more assure you the type of service that has made the name "Clark" famous the length and breadth of the oil country.



Clark Bros. Co. OLEAN N Y

MEN KNOWN IN OILDOM

Dr. P. G. Nutting

Dr. P. G. Nutting is geophysicist at the United States Geological Survey in Washington. He is occupied chiefly with physical and chemical research on petroleum recovery problems. He is responsible for the method of driving spent oil from old oil sands by means of solutions of carbonate of soda. This method showed complete recovery in small scale experiments in the laboratory and is now being given a thorough test on an extensive scale by leading Bradford producers. It is estimated that 2,000,000,000 barrels of the best oil in the world await extraction in this field alone.

Doctor Nutting has been engaged in research all his life. Following 10 years study and research at Stanford, Berkeley, Goettingen and Cornell he went to the then newly organized Bureau of Standards for 10 years. Then followed four years with the Eastman company and four more with the Westinghouse company as director of research. But his chief interest is not administration but research work and at the survey he finds plenty of good tough geophysical problems and freedom to work.

PERSONAL PARAGRAPHS

E. B. Reeser, president of the Barnsdall Oil Company, was a visitor in Tulsa, Okla., last week.

* * *

Fred Robyns, independent operator of Colorado City, Tex., spent several days in Fort Worth, Tex., recently.

* * *

L. D. Armstrong, of the Gaso Pump & Burner Company, has returned from a vacation spent in the North.

* * *

E. M. Delk, president of the Arkansas Drilling Company, El Dorado, Ark., is in Texas on company business.

* * *

B. D. Shurtlett, of Cleveland, Ohio, who is interested in oil royalties, was registered at a Tulsa hotel recently.

* * *

B. L. Woolley, president of the Pacific Petroleum Company, Dallas, Tex., was a recent Shreveport, La., visitor.

* * *

L. F. Smith, of Wheatland & Townsend, experts on oil production by air, has made a trip through the Arkansas oil fields.

* * *

Judge John H. Brennan, chief counsel for the Barnsdall Corporation, is back in Los Angeles, Calif., after spending several months in the company's Oklahoma offices.

John Mouser, of the Prairie Oil & Gas Company's Eastland, Tex., office, spent the week-end in Fort Worth, Tex., last week.

* * *

Ray Sheehan, of the Sheehan Pipe Line Construction Company of Tulsa, Okla., is spending some time at Amarillo, Tex.

* * *

Roy Collom, chief geologist of the Marland Oil Company of California, has returned from his yearly vacation spent in Canada.

* * *

E. E. Schock, independent oil operator, is visiting in Tulsa, Okla., after returning from a two weeks' trip to the Gulf Coast fields.

* * *

Barney Flynn, oil producer, who receives his mail at Mounds, Okla., but who travels most of the time, is spending a few days in Tulsa.

* * *

Rex Dawson, assistant to the head of the Carter Oil Company scouting department, is spending two weeks vacation at Bella Vista, Ark.

* * *

Al. Guiberson, of the Guiberson Corporation, who has been in the East on business for several weeks, has returned to his Los Angeles home.

* * *

Dr. C. P. Watson, of the New York office of the Amerada Petroleum Corporation, has returned from a visit to the Fort Worth, Tex., office.

* * *

C. W. Kettleman of C. W. Kettleman & Company, Greenville, Miss., spent several days in Shreveport, La., in the interest of the Kettleman company.

* * *

J. T. Withers, Jr., of Fort Worth, Tex., of the Bluebonnet Petroleum Company, has been down to San Antonio, Tex., looking over southwest Texas.

* * *

Henry Shafer and Burt Shafer, of the Wheeling Steel Corporation, are in Amarillo, Tex. They are making a tour of all the oil fields of the country.

* * *

A. McGray, of the Gray Process Corporation, Newark, N. J., is spending August in the Mid-Continent Field. He has spent the past week in Texas.

* * *

Ward Blodgett, assistant manager of the Chanslor-Canfield Oil Company, has returned from a very pleasant vacation spent at Huntington Lake Lodge.

* * *

C. C. Beem, of the land department of the California Company, with headquarters at Colorado City, Tex., was a Fort Worth, Tex., visitor last week.

* * *

O. W. Killam, of Laredo, Tex., who drilled the first commercial well in that territory, is taking a vacation in an automobile trip through the Northwest.

* * *

Sir H. W. A. Deterding, managing director of the Royal Dutch Petroleum Company, has come to this country for a conference with American representatives.

* * *

Dr. J. A. L. Henderson has sailed from England for Canada and the United States on professional business, and expects to be absent until about the last of December.

* * *

R. H. Hubbell, of the Hill-Hubbell Company of San Francisco, Calif., is returning to the main office of the company after three months spent in the Mid-Continent Field.

* * *

H. M. Arthur, superintendent of the Shreveport-El Dorado Pipe Line Company, Shreveport, La., is recovering from an illness that kept him confined to his home last week.

* * *

As the result of lightning striking a hut in which he was sheltering, fatal injuries were caused to Engineer Schanzel, of the Vacuum Oil Company, Czechowice, Dziedzice, Poland.

* * *

Paul Paine, formerly with the Shell Company, but now devoting his interest to the Formax Oil Company, is touring Europe with his family, the last card being marked Stockholm, Sweden.

* * *

R. A. Tropp, in charge of the Holdenville district in Oklahoma for the Carter Oil Company scouting department, paid a visit to the main offices in Tulsa. This is his first visit to Tulsa in two years.

Dr. E. A. Stephenson, appraisal engineer and geologist of Pittsburgh, Pa., is spending several weeks in Texas and adjacent states, on a combined business and pleasure trip. He was in Fort Worth, Tex., last week.

* * *

H. J. Lockhart, vice president and general manager of the Parkersburg Rig & Reel Company, Parkersburg, W. Va., spent a week recently in Shreveport, La., and is making a tour of the Mid-Continent and Gulf Coast fields.

* * *

Sidney Powers, chief geologist of the Amerada Petroleum Corporation, was in Shreveport, La., last week. With J. F. Hosterman, the Amerada Corporation's Louisiana-Arkansas geologist, he spent several days in Texas fields.

* * *

W. H. Holmes, Texas oil operator, and John W. McGee, geologist, of the Panhandle district of Texas, have been making a survey of the oil possibilities of the Uintah Basin, with the assistance of John W. Crapo, geologist, of Roosevelt.

* * *

C. H. Smith has been added to the land department of the Wiser Oil Company. During the past 12 years Mr. Smith has been connected with Carter Oil Company which was taken over by the Hope Construction & Refining Company.

* * *

W. E. Ramsey, who with his brother developed quite a substantial production on municipally owned property in the Long Beach, Calif. Field, is stopping at the Biltmore Hotel in Los Angeles, but expects to leave for Oklahoma within a week.

* * *

Lew Sontag and Mrs. Sontag have left Casper, Wyo., the past week for the Cat Creek Field. Mr. Sontag was the first field man for the Frantz interests in the Cat Creek Field. He is drilling a wildcat near the river at Cat Creek.

* * *

L. R. Mazey, Montana State oil and gas inspector, has returned to Great Falls, Mont., following several days spent in the Big Lake Field, near Billings, where he was detailed by the board of railway commissioners to make a study of conservation problems.

* * *

Seth T. Heney, of Los Angeles, Calif., is in San Antonio, Tex., conferring with Ralph Arnold, geologist of California, on Mexican interests. Mr. Heney located the big structures in Coahuila on the Cardenas ranch where the Mid-Kansas Oil & Gas Company (Ohio-Mexico Oil Company) is to drill and is now doing the geological work.

* * *

Daniel Harrington, of Salt Lake City, Utah, was selected from 144 applicants for the position of chief engineer of the safety service of the United States Bureau of Mines. Announcement of the appointment was made by Scott Turner, director of the bureau at Washington, D. C. Mr. Harrington began work August 1.

* * *

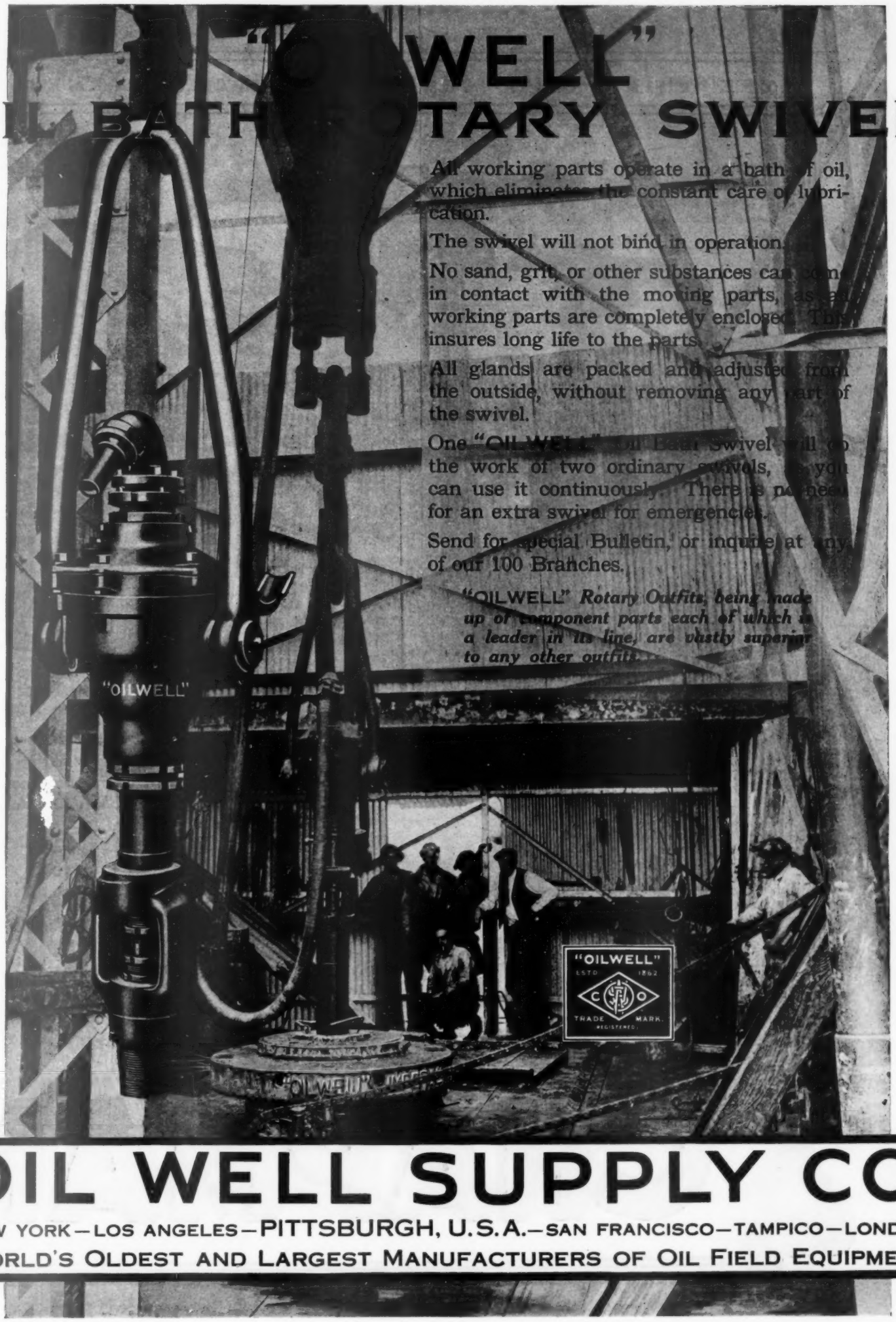
Jack Dillinger, general superintendent of the Roxana Petroleum Corporation in Texas, is being transferred to Mexico, where he will be in charge of the Roxana interests. E. G. Allen, formerly engineer in the operating department at Tulsa, will succeed Mr. Dillinger as general superintendent of the Texas division.

* * *

E. J. Mary, refinery superintendent for the Simms Oil Company of Dallas, Tex., has resigned, effective September 1, to accept a similar position with the Shreveport Producing & Refining Company, of Shreveport, La. Mr. Mary was formerly from Shreveport, having been connected with the old Caddo Central Company.

* * *

Frank G. Kistler, former president of the Producers & Refiners Corporation, was a recent visitor to Parco, Wyo., the headquarters of that firm in Wyoming. Mr. Kistler came to Parco to finish some business connected with the Producers & Refiners Corporation during his presidency and to gather up the loose ends of some matters relative to his former business connections. At present Mr. Kistler is preparing to form another oil organization. He has merged the Blackhawk Oil Company, the Hawkeye Oil Company, and the Petroleum Securities under his management. Mr. Kistler and the new companies he has formed, will devote their activities to holdings in the Texas fields at present.



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All working parts operate in a bath of oil, which eliminates the constant care of lubrication.

The swivel will not bind in operation.

No sand, grit, or other substances can come in contact with the moving parts, as all working parts are completely enclosed. This insures long life to the parts.

All glands are packed and adjusted from the outside, without removing any part of the swivel.

One "OILWELL" Oil Bath Swivel will do the work of two ordinary swivels, as you can use it continuously. There is no need for an extra swivel for emergencies.

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What are you doing to plug the leak of $8.50 to $9.00 per-1000-bbls.-of-crude-run that is the annual piping maintenance charge? That is the figure at one big refinery—a well-engineered plant, too. Your dollar leakage may be more or less,—but valve replacements are costing you real money. You can

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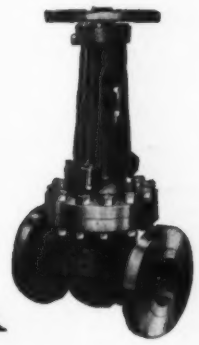
VALVES



EQUIPMENT AND SUPPLIES

SIX MILLION CONTRACT TO AUSTIN COMPANY

A $6,000,000 automobile plant, one of the largest industrial building contracts in the country let this year, has been placed with the Austin Co., Cleveland. The new Pontiac plant for Oakland Motor Car Co. is to be built at Pontiac, Mich.

Work was started recently. This construction contract followed close on the heels of an engineering contract which was placed with Austin in June. The amount of the engineering contract alone was approximately $150,000.

The new plant comprises over 2,000,000 square feet of floor space with the following buildings to be built at this time. A motor plant of single story design 455 by 880 feet; an assembly building 180 by 1,260 feet, three stories and basement; a foundry 300 by 700 feet, and a car storage building 432 by 760 feet.

NEW DIE STOCK FOR LARGER PIPE SIZES

A new easy cutting pipe threader for the larger sizes known as No. 44 Receder has just been placed on the market by the Oster Manufacturing Co., of Cleveland, Ohio. The tool gets its easy cutting qualities from its narrow dies which are ground with an extra long lead and sharp rake. To further increase the ease of cutting, the tool is geared and is furnished with a ratchet handle so that one man can cut 4-inch pipe without hard work.

Describing the tool the manufacturers say: A massive leader screw protected by a patented chip shield starts the dies on the pipe and pulls them along, producing the proper pitch and taper. The leader screw, which is of great importance to a tool of this type, is kept free from dirt and chips by the patented shield. Thus the leader screw is not subjected to any undue wear caused by chips and its life is materially lengthened.

The threading of short nipples is possible, as the bore of the stock is large enough to accommodate even a 4-inch coupling.

TRADE LITERATURE RECEIVED

The Kerotest Manufacturing Co., of Pittsburgh, Pa., has mailed out folders regarding Kerotest valves and fittings. It is illustrated and shows this type of fitting in use on extraordinary wells.

—

The Purox Co. of Denver, Colo., has distributed Catalog No. 6 and a supplementary price list. This reading matter is something more than a catalog, as it describes the agency of every separate piece of welding apparatus in the equipment.

The W-K-M Co., Inc., of Houston, Tex., has distributed pamphlet No. 250 announcing the W-K-M tubing slip and spider. The merits and operation of this tool are amply described.

—

The Midwest Steel & Supply Co., of Bradford, Pa., announces it is preparing to market a new safety device for the prevention of explosions of volatile liquids in containers. This device is called "Ventex" and is manufactured in two types. The construction of each type is simple. It combines the principle of a cylindrical metal mesh screen double-walled; which, while permitting the free passage of liquid, vapor of gas, will not allow the passage of spark or flame. A safety pressurve valve cap closes the opening of this screen tube to make the container gas-tight.

STILL NO ABATEMENT IN DEMAND FOR OIL COUNTRY TUBULAR GOODS

By B. E. V. Luty

PITTSBURGH, Pa., Aug. 9.—With the summer half over there is no abatement in demand for oil country tubular goods. Apparently there has been a little increase in the past few weeks, judging by the delivery promises of the pipe mills, which have not shortened at all. The usual promise on casing in ordinary sizes is four to six weeks. Promises a month ago were approximately the same. It is known that not all the promises have been fully kept. Pipe mills are receiving inquiries from unusual sources, from jobbers who do not usually deal with them, which suggests that such jobbers have not been getting the delivery service they expected. On some sizes of tubing deliveries are even slower than on casing.

Merchant pipe is in very good demand but mills have not fallen behindhand, and on butt weld pipe generally deliveries are fairly prompt. Regular pipe mill practice is to ship merchant pipe from stock, production being for replenishment of stock. In oil country goods stocks are frequently accumulated by mills, but commonly shipments are made chiefly as the material is being produced. At the present time there are no mill stocks of consequence in oil country goods, and as the mills are filled for several weeks they schedule good sized runs on given sizes. This makes an economical operation and conduces to large tonnage output but slows down deliveries as compared with what occurs when mills are waiting for orders.

Operation 90 Per Cent

The general operation of the pipe industry is at fully 90 per cent of capacity. Idleness, amounting to not more than 10 per cent of the total, is confined to two or three more or less obsolete plants and to a few butt weld furnaces. Substantially the entire lap weld capacity is in full operation. The Pennsylvania Works, in Pittsburgh, of the National Tube Co., was idle for a long time but was recently put in partial operation while it is now running full. It makes oil country goods exclusively and is operated only in times of exceptional demand, being considered an emergency plant.

No line pipe business of consequence has been booked lately. Mills do not want orders of that sort at this time and are not offering anything like attractive deliveries while of course they would make no quantity discount even on orders of the largest size. The mills would like to see line pipe business hold off until such time as they need tonnage orders. Some of the line pipe orders now being worked on will be completed in a few weeks, releasing capacity to be

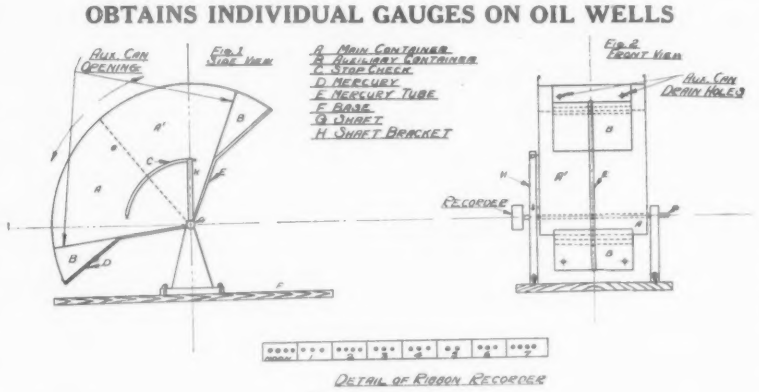
(Continued on Page 100)

PRESCOTT PUMPS HANDLE COLOMBIAN PETROLEUM

The Prescott Co., of Menominee, Mich., has a personal pride in the successful operation of the Andian National Corp.'s pipeline in Colombia and in the shipment to the United States of the first oil through that line and by tanker from the seaboard terminal. Prescott pumps forced the oil through the pipeline and Prescott pumps put this crude on board the tanker which brought the first cargo to the United States.

The large business being done in the equipment end of the petroleum industry is illustrated by the orders received by the Prescott Co. from the Magnolia Petroleum Co. so far this year. These orders included ten 10,000-bbl. pipeline pumps; eight 12,000-bbl. pumps; one 22,000-bbl. machine and some other equipment which included four 26,000-bbl. pumps for the Magnolia's dehydrating plant at Luling, making a total of 25 big pumps to this one company since January 1.

OBTAINS INDIVIDUAL GAUGES ON OIL WELLS



Wagner Oil Meter

The Wagner Oil Meter is designed to obtain individual gauges on oil wells where more than one well is pumping into a flow tank. It is not affected by a pulsating volume, it is explained, the gas flow which comes with the oil will have no effect, and the meter has no close working parts to be affected by sand pumpings or paraffin.

The meter operates as follows: In Fig. 1, main container A1 is in a filling position, the fluid enters at the top of container and when it reaches the opening to auxiliary can B, attached to main container, the weight of fluid which enters the auxiliary can causes it to tip or rock on shaft G, emptying A1 and putting the container A into a filling position. E shows a tube which contains mercury, showing at D, which gravitates from one side to the other as containers A and A1 empty, the mercury gravitating to the low or emptying container, keeping the other container in a filling position until overcome by the weight of the fluid in auxiliary can B. C shows a stop with a set screw at each end which holds or stops containers in the right position. Ribbon recorder operates off from shaft G which makes a perforation in ribbon when a barrel has been measured giving a record of when the well was pumped, also the number of hours and the number of barrels or gallons measured.

PORTABLE ABSORPTION PLANTS PURCHASED

A number of oil companies have purchased portable absorption plants to take care of new gas production during the past month. The Anglo-Mexican Petroleum Co., Ltd., is installing a plant at Tampico, Mexico; the Atlantic Oil Producing Co. will have a plant at Slick, Okla.; a plant will be put in operation at Kelleyville, Okla. by the Major Gasoline Co.; Amerada Petroleum Corp. and the Roxana Petroleum Corp are installing additional plants, already having several in operation, and the California Texas Gasoline Co. will soon have a plant in operation in the Panhandle, Texas. In California, Bolsa Chica, in the new field in Ventura, will shortly have a plant operating. All of these plants are of the "Southwestern" type, manufactured by the Southwestern Engineering Corp. of Los Angeles, Calif.

HAS NOVEL FEATURE

Templeton, Kenly & Co., of Chicago, have mailed circulars illustrating a new and unque feature which has just been

added to the regular jacks sold by them for oil field use.

The new No. 29 Simplex is a 15-ton automatic lowering jack which is widely used for skidding rigs. The new feature consists of a drop forged adjustable shoe or claw which can be adjusted into the recessed cap at two positions. This provides additional lifting ranges and increases the utility of the jack.

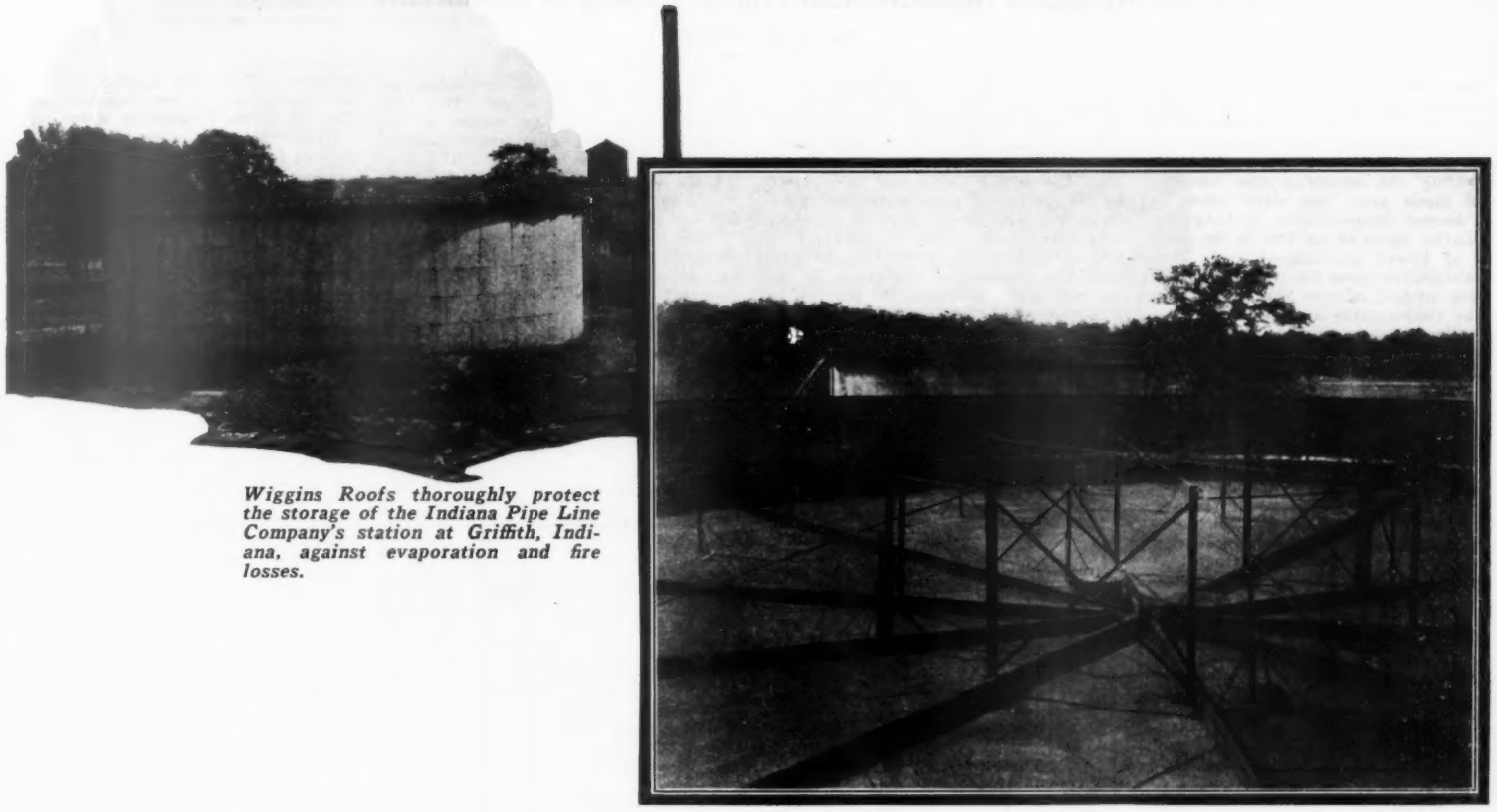
FOAMITE-CHILDS CORP. WILL MARKET AMDYCO

Under an arrangement that should prove valuable to present and future users of the Amdyco continuous foam method of firefighting, the Foamite-Childs Corp. will henceforth market and service all Amdyco Generator products.

The New York office of the Amdyco Corp. will continue to fill orders addressed to it, but the complete service will be under the direction of Foamite-Childs Corp., with general offices and factory at Utica, N. Y., and a competent staff of sales and engineering representatives in leading cities of the world.

AIR LIFT METHODS

The Sullivan Machinery Co. of Chicago has sent out Bulletin No. 71-I, devoted to Sullivan air lift pumping methods and equipment. The booklet shows installations in which this system is used in industrial and railway service. Air lift performance is featured in a table and chart, and instructions for securing well data and for estimates on this style pumping are given in detail.



Wiggins Roofs thoroughly protect the storage of the Indiana Pipe Line Company's station at Griffith, Indiana, against evaporation and fire losses.

Wiggins Roofs save oil where conservation is important

OIL in working tanks at pumping stations has an increased value after having been transported over long distances. Thorough protection against losses from evaporation and fire is important.

Wiggins Roofs, by covering the oil surface with a floating steel pan and a gastight seal, protect pipe line tanks from losses through evaporation. The gravity of the crude oil is maintained, since its lighter and more valuable fractions are not lost.

With Wiggins Roofs vapor space is reduced to a negligible volume beneath the gastight seal. Thermal breathing and its attendant losses are eliminated. The gastight seal stops splash-over and retains air, accidently pumped into the tank with the oil, until it loses its entrained oil particles. A self-closing vent discharges the air to atmosphere and the oil particles return to the tank.

The steel deck and fire safe seal stop fire before it can reach the oil surface.

Wiggins Roofs on your tanks will save the evaporation loss and give you protection against fire. Let us send you a quotation on Wiggins Roofs for your present storage or a quotation on new tanks complete with Wiggins Roofs.

CHICAGO BRIDGE & IRON WORKS

CHICAGO, 2128 Old Colony Bldg. DALLAS, 1641 Praetorian Bldg.
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OGJ8-12Gray

Volatility Test for Automobile Fuels

Equilibrium Air-Distillation Method Gives Direct Means of Measurement Under Variety of Conditions

By T. S. Sligh, Jr.*
Physicist, U. S. Bureau of Standards

The method of attack which seems most promising consists essentially in supplying air and liquid fuel at measured rates to an evaporating coil, observing the temperature corresponding to equilibrium, separating and measuring the unevaporated liquid and, from data taken at the desired temperatures, plotting the distillation curve of the fuel in the presence of known amounts of air. Thus the distillation curve for the fuel in any desired air-fuel mixture can be obtained at the temperatures and fuel-vapor concentrations corresponding to engine operation.

This general method has been in the foreground for a year or more as one which appeared to be very desirable from the theoretical viewpoint, since it permitted measurement of fuel volatility under conditions practically identical with those prevailing in the utilization of the fuel. However, it seemed to present very real practical difficulties in the precise control and measurement of fuel-flow and air-flow. The satisfactory solution now seems to lie in control and measurement of fuel by displacement of the fuel from a reservoir by a clock-controlled displacement cylinder and the measurement of air-flow by a small orifice meter. A brief description of this apparatus, then in course of construction, was presented at the 1926 annual meeting of the society, and was later published.

A diagrammatic sketch of the apparatus is shown in Figure 2. The evaporator element a is a helix about 4 inches in diameter formed of about 16 feet of metal tubing of 7/16-inch outside diameter. The lower end of the helix delivers into a separating chamber or trap, b, from which a short tube, c, about 3/16-inch in diameter drains the unevaporated liquid to a graduated tube, d. The air-fuel vapor mixture is discharged to waste at e.

Air is supplied from a low-pressure system, 1.5 pounds per square inch is sufficient, and is measured by the orifice meter f, which consists of a thin disc, g, through which is bored a small hole 5/32-inch. in diameter and which has square edges. The tube, h, serves to eliminate swirls in the air-stream ahead of the orifice. The pressure-drop across the orifice is measured on the water manometer, i, which connects to the pressure taps. The air is brought to the temperature of the bath in the helix j before entering the evaporator helix a. Fuel is delivered from the reservoir k through the sloping tube, l, which fits closely into a tube soldered to the helix and is sealed with a short length of rubber tube or can be soldered, if desired.

The rate of fuel feed is determined by the rate of fall of the displacement plunger m, which is controlled by the clock mechanism, n. This is a clock such as is used to drive the chart on recording devices and makes one revolution in 15 minutes. A drum, o, is mounted on the main shaft through a ratchet-clutch to permit rewinding the wire which runs on the drum. This wire passes through the cup, p, which carries a stuffing-box to prevent leakage of air and is connected to the displacement plunger, m. The main spring of the clock has been removed and it is driven by the weight of the plunger, the gear-train and escapement serving to regulate the motion. The volume rate of feed of the fuel is determined by the clock rate, the diameter of the drum, o, and the cross-sectional area of the plunger, m. The volume of fuel supplied multiplied by its specific gravity or, more correctly, by its density at the existing temperature, gives the rate of feed in terms of weight.

Operation

With the evaporator element a in a bath at the desired temperature, and the displacement plunger, m, at the top of the reservoir, k, as shown, the fuel, the specific gravity of which is known, is poured into the reservoir, k, through the filling tube. The apparatus is set to deliver a definite volume, say 3 cc. per minute. From the specific gravity of the fuel and its volume rate of feed, the weight of air required to give the desired air-fuel mixture is calculated and the air-flow is set from this rate. The required head on the manometer, i, is read from a calibration curve or is calculated from the formula $M = K \sqrt{h}$ where M is the rate of air-flow in grams per minutes, K is a constant for the particular orifice, h is the difference in level of the water in the two arms of the manometer, i, expressed in centimeters, and p is the density of the air at the temperature and pressure of the low side of the orifice.

The air-flow and the fuel-flow are started and, when liquid begins to collect in the graduated tube d, readings of rate of collection are made. This rate should become constant within a few minutes when the final observation of rate of collection is made. The percentage evaporated by volume, is then (1 — (rate of collection ÷ rate of feed)) × 100. If desired, the density of the unevaporated liquid can be determined, and the percentage evaporated by weight can be calculated. This process can be repeated as desired, at various temperatures and air-fuel ratios.

The size of tube d is selected to give the desired precision. A 1-cc. or a 5-cc. tube is desirable for work near the end-point, and a larger tube is conveniently used for conditions of partial evaporation. To eliminate drainage errors when the tube is filling rapidly, the time should be noted when the meniscus passes some convenient index-line on the tube. A definite volume, 1, 5 or 10 cc., is subsequently drained out into an accurate graduate or calibrated flask and the time noted when the meniscus again passes the index line. The interval accurately represents the time required for the accumulation of the measured volume.

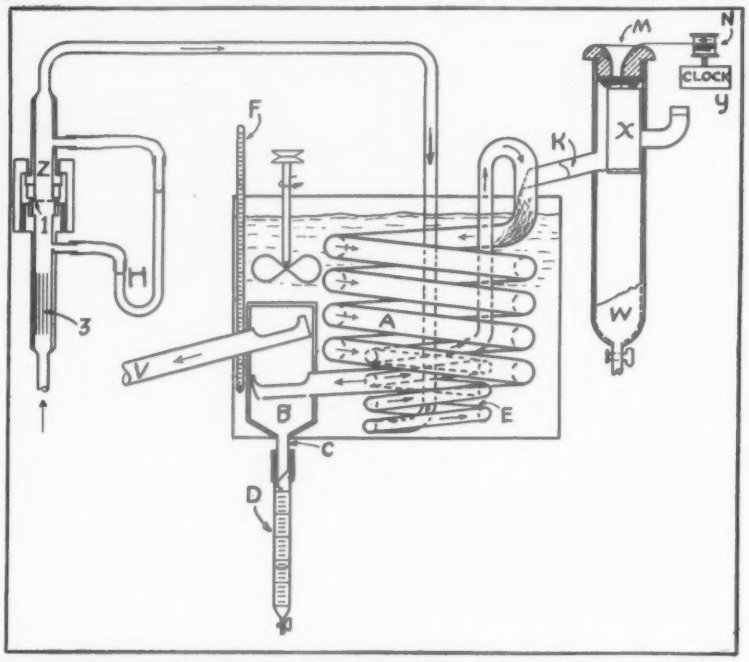

Fig. 2.—Apparatus for measurement of fuel volatility under conditions of utilization of the engine. The evaporator element a is a helix about 4 inches in diameter, formed of about 16 feet of 7/16-inch metal tubing. The lower end of the heli delivers into a separating chamber or trap, b, from which a short 3/16-inch tube drains the unevaporated liquid to a graduated tube, d. The air-fuel vapor mixture is discharged to waste at e.

Experimental Results

In general, it is desired that vapor and temperature equilibrium conditions be realized in the apparatus if results are to be truly indicative of the volatility characteristics of the fuel. These conditions were tested by making observations of the percentage of fuel evaporated at various rates of flow at the same temperature. Independence of the percentage evaporated of the rates of air and of fuel feed, the ratio being kept constant, appears to be sufficient evidence that equilibrium has been reached. This test applies to helices of various lengths and diameters led to the use of the dimensions stated.

With this apparatus, increasing the rate of feed from 2 to 3 cc. per minute produces no detectable change in the percentage evaporated near the endpoint, and a farther increase to 4 cc. per minute, brings in a slight decrease, less than 1 per cent in the amount evaporated. Increased air and fuel rates call for an increased rate of heat transfer; in addition, the increased air-velocity tends to sweep the fuel through the heliz more rapidly, thus tending further to reduce the opportunity for heat transfer.

The results reported here were, for the most part, obtained with the 3-cc. fuel rate and probably are within 1 or 2 per cent of the truth. The responsibility of the results is within 1 per cent; that is, check results on different runs agree within better than 1 per cent as to the percentage evaporated.

The desirable feature of this method of test is that the fuel is evaporated under essentially the conditions of utilization in the engine; that is, at low vapor-concentrations in the presence of relatively large volumes of air. In addition, direct measurement of the weight of fuel evaporated avoids the necessity of calculations involving vapor-pressures and molecular weights which require measurement of these quantities. The test procedure and the application of test results to the relative rating of fuels are reasonably simple and direct because the test results are dependent only on the volatility characteristic of the fuel which are definite physical constants.

In Figure 3, the curve A represents the air equilibrium-distillation of an average gasoline fuel in the presence of 15 times its weight of air, and this illustrates well the general characteristics of such distillation curves. It should be noted that the curve from 30 or 40 to 95 or 100 per cent is practically a straight line, and that the lower end breaks away rather sharply. The upper end may be straight or may droop slightly below or rise above the straight line as indicated by the dotted lines, depend-

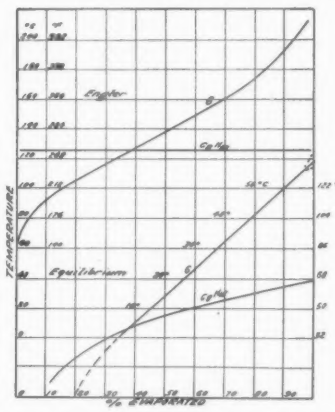

Fig. 3.—Air equilibrium-distillation of an average gasoline in the presence of 15 times its weight of air. It should be noted that the curve from 30 or 40 to 95 or 100 per cent is practically a straight line, and that the lower end breaks away sharply.

(Continued on Page 94)

*This article is an extract of a paper presented at the semi-annual meeting of the Society of Automotive Engineers and reprinted from the society's journal. In the fore part of the article, Mr. Sligh discussed several of the older methods of measuring the volatility of motor fuels.

The remainder of the paper which is given here deals with the new method developed in connection with the work being done on the measurement of motor fuel volatility which has been carried on as a part of the Co-Operative Fuel Research program. This Co-Operative Fuel Research has been in progress at the Bureau of Standards since August, 1922, under the direction of a steering committee composed of representatives of the co-operating organizations, which are the American Petroleum Institute, the National Automobile Chamber of Commerce, the Bureau of Standards and the society.

TABLE 2.—SATURATION TEMPERATURES FOR VARIOUS AIR-FUEL RATIOS

Fuel No.	Saturation Temperatures 10 to 1 Deg. Cent.	10 to 1 Deg. Fahr.	8 to 1 Deg. Cent.	8 to 1 Deg. Fahr.	4 to 1 Deg. Cent.	4 to 1 Deg. Fahr.	Engler Distillation 80 Per Cent Deg. Cent.	80 Per Cent Deg. Fahr.	85 Per Cent Deg. Cent.	85 Per Cent Deg. Fahr.	90 Per Cent Deg. Cent.	90 Per Cent Deg. Fahr.
1	65.0	149.0	68.0	154.4	70.0	158.0	76.0	168.8	94.0	201.2	183.0	361.4
2	59.0	138.2	62.0	143.6	63.0	143.6	67.0	149.0	79.0	174.2	174.0	345.2
3	63.0	145.4	67.0	152.6	69.0	156.2	76.0	168.0	97.0	206.6	183.0	361.4
6	59.0	138.2	63.0	143.6	64.0	147.8	68.0	154.4	79.0	174.2	163.0	325.4
6 + 40	50.0	122.0	52.5	126.5	54.0	129.2	58.0	136.4	70.0	158.0	155.0	311.0

Fuel No.	85 Per Cent Deg. Cent.	85 Per Cent Deg. Fahr.	90 Per Cent Deg. Cent.	90 Per Cent Deg. Fahr.
1	188.0	370.4	197.0	386.6
2	195.0	365.0	197.0	386.6
3	188.0	370.4	197.0	386.6
6	181.0	357.8	191.0	375.8
6 + 40	167.0	332.6	180.0	356.0

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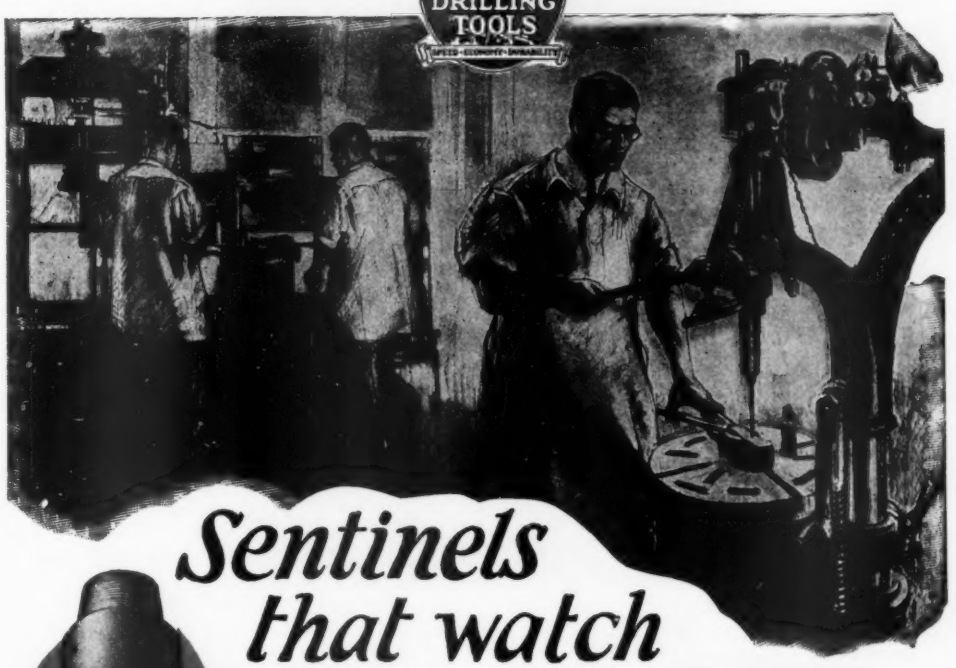

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(Standard Model)

SPEED in cutting; tremendous strength; perfect balance and direction; ease of handling on the derrick floor; slush lubrication; quick cutter change; and economy of operation, have made the Reed Rock Bit the dominant rock-cutting tool in rotary fields.

Testing and re-testing, analyzing and re-analyzing every heat of every different steel, and each pouring for castings that go into the make-up of Reed Products, guarantee a uniformity of quality far beyond the ordinary.

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The United States Rubber Company is the largest single producer of crude rubber in the world.

Every pound of rubber that comes from our great plantations in Sumatra and Malaya is treated from the time it leaves the tree with a distinct view to the type of product into which it will be made—and the service which that product must perform.

In 1911 we started our own plantations in Sumatra, Dutch East Indies. Today, the United States Rubber Company operates the largest rubber plantation in the world, with over seven million trees in actual cultivation.

A recent report by Herbert Ashplant, noted rubber authority and Government Rubber Mycologist of Southern India, states:

> "Of all the rubber areas visited, none produced so much unusual information as the Plantations of the United States Rubber Company in Sumatra. Kisaran, headquarters of these plantations, has become the Mecca of all planters who wish to keep abreast of recent rubber research."

We have been growing rubber on our own plantations for fifteen years. Today, the finest rubber produced anywhere in the world goes into the products carrying the famous "U.S." trade mark. For example—

"U.S." Mechanical Rubber Goods for every oil industry need

From "spudding in" to the final break-down in refinery stills; from drilling rig, rotary or standard, to pipe line station; from gasoline plant to filling station, GOOD Mechanical Rubber Goods play an indispensable part in oil industry operations.

The United States Rubber Company has been manufacturing Mechanical Rubber Goods for over seventy-five years. From coast to coast, in every field, the "U.S." trade mark is recognized as a guarantee of maximum service and satisfaction.

From the earliest days of the oil industry our oil field and oil refinery specialists have closely followed and studied every development and operating problem of the industry. This practical knowledge has enabled us to continually plan and produce better rubber products to meet the operating man's demand for greater efficiency.

Refinery Packings That Keep Down Maintenance Costs

Back in the days before Cushing and Burkburnett came in—long before the refineries that followed these fields were thought of—our packing experts were analyzing the operating problems of the refiner.

We're mighty proud of the fact that a large proportion of the refineries running oil from these famous fields and the most important fields developed since then, have standardized on "U.S." Packings.

No other packing manufacturer has made such a thorough investigation of the packing requirements of the modern refinery and gasoline plant as has the United States Rubber Company. There is not a condition from the handling of crude in the pipe line to the various pumps carrying gasoline, kerosene and hot oils, down to hot tar, that is not being packed successfully and economically with "U.S." Packing—sheet, gasket and pump. Refinery service records show that "U.S." Packings *do* make a difference.

"U.S." Matchless Inner-stitched Belt for Drilling and Pumping

Twenty years ago when oil wells were shallow and 2000 feet was a "deep hole" almost any belt would give satisfactory service. But with deeper drilling, the use of central pumping power, with its compound twist drive and the natural gasoline development, came the demand for a better belt, which would give satisfactory service in all classes of field work.

Our belting experts answered this demand with "U.S." Matchless Inner-stitched Belt. Hundreds of thousands of feet of this belt have been sold in the past ten years. It has a record of unusual service, and we have never had a single adjustment because of "bootlegging."

"U.S." Hose for Every Purpose

We have given special attention to the development of a complete line of "U.S." Hose for every oil industry operation. It ranges from the famous "U.S." Rotary Hose, and the heavy armored conducting hose for sea loading and all-around suction and discharge to the smaller types for barrel filling, tank car and wagon.

"U.S." 48-10 Air Hose is well known in every industrial field. The same is true of "U.S." Steam, Water, Fire and Welding Hose.

"U.S." Giant Gasoline Filling Station Hose, with its special patented couplings, has made exceptional records of service wherever installed.

Pioneers in Oil Field Rubber Goods

The United States Rubber Company for many years has led in the development and improvement of Mechanical Rubber Goods:

—First to make a stitched rubber-covered belt.
—First introducers of the inner-stitched belt.
—Originators of the hollowed-out or concave swab rubber.
—Builders of first satisfactory gasoline-proof composition gasket for tank car dome covers and outlet caps.
—Originators of solid rubber slush pump sleeve.
—Builders of first safety rubber cover for nitroglycerine cans—reducing its transportation risk to minimum.
—Originators of famous bandless nipple for oil hose.

Branches Equipped for Service

Whatever your Mechanical Rubber requirements may be—whether it is a question of a driller belt or a length of gasoline hose, a swab rubber or an oil-proof packing—our oil field branches are equipped for real service. They are operated by men who are not only experts on Mechanical Rubber Goods, but practical oil men as well. Their advice is at your disposal. You will find it valuable.

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EVERY DAY or so we hear unsolicited praise for the quality of La Belle Casing, Tubing and Line Pipe, because it keeps faith with the driller and pipeliner, justifying even more than the conservative claims we make for it.

High tensile strength to a point beyond today's expectations of the job; clean, accurate threading of pipe and coupling to maintain the trueness of each joint, and stocks available in every field for prompt delivery—these are reasons why La Belle is making fast friends wherever Oil or Gas is the business at hand.

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Stocks of La Belle Casing at Taft, California

"From Mine to Market"

WHEELING STEEL

LA BELLE

CASING · TUBING · LINE PIPE

CENTRAL WEST FIELD

(Continued from Page 58)

Two oil leases on land in Nottingham Township, Wells County, have been obtained from Oliver Burgess, William Anderson, Henry Risser and Egly Brothers and the John A. Pickering 200 acres, and wells are expected to be started in short order.

R. A. Graham of Fort Laramie, Ohio, is shipping in a string of tools. He will erect a rig on the Kauffman farm, south of the Niblick farm, in Jefferson Township, Adams County, and east of Berne. Spudding will start within a few days.

In Wabash Township, Adams County, O. C. Funk and others' test on the Mrs. Dan Hawbacker farm, Section 17, is estimated at 20 bbls. initial and adds quite an interesting territory to develop. Harmon & Watts are nearing pay sand with their second well on the William Smiley Section 6, Jefferson Township, same county. Kelly & Daugherty are setting up for a well on the B. Parr 160 acres, Section 12, Wabash Township, same county. This is several locations in advance of production. George S. Lacknett will start a test on the John Parr 80 acres, Section 5, Jefferson Township.

Parties from Berne and Fort Wayne have formed a company to drill 12 wells on a block of 700 acres, south of the producing wells on the Niblick farm. R. S. Anderson and Christensen are starting their second test on the Stengel-Craig farm of 90 acres, Section 36, Monroe Township, Adams County.

No. 5 on the Niblick farm, in Jefferson Township, opened by J. H. Harmon and others of Mansfield, Ohio, still continues strong on its seventh week of pumping natural, also as does an old well drilled 24 years ago on this farm. These facts coupled with the good well drilled by McKelvy on the Bollenbecker, and the past performance of the Berne Field wells, makes this new area look more inviting from day to day and is bound to help out the production figures of the Indiana Field in the future.

Unknown parties are starting a test well east of Mt. Carmel and the Wabash River, in Decker Township, Knox County, in hopes of getting a producer worth while as the later completions in that township, have proven of no value. This is located to the southeast of the Allendale Field, of Wabash County, Illinois, and on a line southeast toward the Princeton, Ind., district.

In Barton Township, Gibson County, the Bell Brothers are drilling a wildcat on the M. M. Conrad farm, Section 10. In Washington Township, same county, the same firm is working at a test on the Joseph Armstrong farm, Lot 108, and in Center Township, the Ohio Oil Co. is drilling a test on the A. J. Maus farm, Section 16.

Illinois

Little activity is shown in new development work over the Illinois Field, owing to the lack of water for drilling purposes, although the first of the week a bountiful rain prevailed that may help out. The interesting well of the week was that of the Adams Corner Oil Co., on the W. O. Johnson farm, in the north half of Section 6, Wabash Township, Wabash County, and a few locations to the northeast of the discovery well of the Allendale Pool, on the S. J. Stillwell farm. The Johnson well has not been put on the pump but makes a showing for a good producer when connected up. It has been estimated from 100 to 150 bbls. but nothing can be given until a 24-hour gauge has been made. It will bring more active development to the northeast of the pool where little work has been done as the trade has always favored an almost direct 20 degrees to the northwest.

In the heart of the Allendale Field the Breen Oil Co. has made a location on the Breen farm, Section 2 and an offset to Mayhugh and others' No. 7 on the Kogan heirs farm. Mayhugh and others are working at No. 8 on the Kogan heirs farm. This firm is installing a second power pumping plant on the property, as the present plant has been taking care of wells Nos. 4, 5 and 6. This is a wonderful property, all wells having been larger producers. The Mt. Carmel Oil Co. operating the Leek lease has drilled Nos. 2 and 3 wells deeper and has given them shots, which has made a considerable increase in production. No. 6 is drilling in the southeast corner of the farm, and will be drilled to the deeper sand which has been found on the Eastern Gulf Oil Co.'s Cisil heirs lease on the south. No. 3 of this company on this farm is being cleaned out preparatory to putting it on the pump and No. 4 is starting, on the Jessie Cisil as is its No. 1 on the Sallie Compton farm, Section 11, Wabash Township.

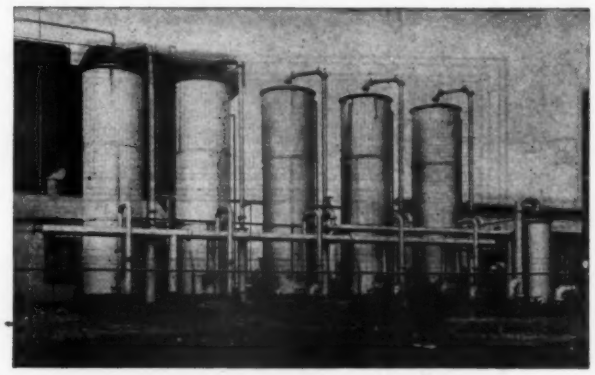
In the same field the well that made such a nice showing in the shallow Bridgeport sand on the Armstrong farm is now rigged up and drilling for the Biehl sand. The Mahutska Oil Co. is starting No. 5 on the Mack Madden farm, Section 7, an offset to the good well recently completed by the Adams Corner Oil Co. on a part of the Madden farm. Rahl and others are starting a well on the A. A. Gehr farm of 45 acres, north of the Madden farm and along the Wabash River, the closest of the recent drilling to this big stream. It will be a very important test for the farm as well as the east line of the Catherine Keyser farm, to the west, and the north part of the Madden farm to the south and close to a mile almost direct east of the pool's discovery well on the S. J. Stillwell farm. The Collison Farm Oil Co., Whitmer, Abbott and others of Robinson, is putting No. 3 on the pump and getting ready to start No. 4, a location north of No. 3. The Allendale Oil Co is starting a well on the Joseph Keyser 100 acres, southeast a short distance from Allendale, in Section 13 and southeast of the Collision heirs farm. Same company is cleaning out Nos. 1 and 2 on the Alka farm, Section 1. The Mac's Oil Co. is installing a new engine and vacuum on the Holson-Dorney farm and is making extensive improvements in its properties by adding a new 35-horsepower engine. The Dave Oil Co. is installing a new vacuum and power plant on its lease on a part of the Holson-Dorney property. McAlpin, Risley and others have arranged for the drilling of a well on the L. G. Stillwell farm, Section 12, offset to the Tracy Oil Co.'s No. 1 on the Tracy heirs farm. The Tracy Oil Co. is starting No. 2 on the Tracy heirs. Smith, Hughes and others are drilling on the Adam Schaffer farm, just west of Allendale, in the northeast quarter of Section 15.

In Friendsville Township, Wabash County, east of the hamlet of Friendsville, the Wood Oil Co. has installed a pumping power plant on the W. O. Wood farm, Section 19, and started work at well No. 3 on the lease. Miller, Carnes and others are drilling a well on the Christ Frick farm, Section 19, offsetting No. 2 on the J. O. Woods farm and they are installing a power plant on the Ezra Bass farm where the discovery well of the pool was found. Henneberger, Young and others are drilling No. 1 on the J. Goodart farm, in the southeast quarter of the northeast quarter of Section 24, northwest of the Bass well and about a mile direct east of Friendsville. Henneberger Alspaugh and others are drilling No. 1 on the Abner Litherland 160 acres in the northwest quarter of Section 26, aljoining their producer on the Bob Liddle farm.

In Centralia Township, Marion County, the Petro Oil & Gas Co.'s No. 14 on the John Kinsey farm, Section 30, is a dry hole at 790 feet, or at least that is the reported depth of the hole, as the owners refused to state the depth.

Bell Brothers' No. 8 well, 1,300 feet from the north line and 250 feet from the east line of the Wiley Lamb farm, Section 26, Prairie Township, Crawford County, pumped but 1 bbl. initial at a depth of 994 feet.

In Johnson Township, Clark County, the Southern Oil Co.'s No. 33 on the C. O. Gross No. 2 farm, Section 24, pumped 8 bbls. initial at 612 feet. In Casey Township, the Trenton Rock Oil & Gas Co.'s test on the northwest corner of the N. L. Slater farm, in the northeast



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quarter of Section 25, showed for a couple barrels but th hole was abandoned. In Parker Township, the Ohio Oil Co.'s No. 118 well, 1,660 feet from the north line and 2,060 feet from the east line of the N. & K. Young farm, is credited with an initial of 1 bbl. at 535 feet. It was upon this farm away back about 1904 that Hockstetter and Son opened up the Illinois Field.

Central Ohio

About a dozen completions are reported for the week from the Central Ohio Field property, the East Ohio Oil Co.'s No. 3 on the D. R. Anderson farm, Lot 24, Hardy Township, Holmes County, is a light gas well. In Monroe Township, same county, the Empore Gas & Fuel Co.'s No. 1 in the southwest corner of the Oscar Steel 115 acres, Lot 6, is a nice gas producer. In Paint Township, the Ohio Fuel Gas Co. has a light gas well at a test in the southwest corner of the Dan C. Wengard 65 acres, Lot 6. The Klise-Eckstein-McCann Co.'s test in the northeast corner of the Laura E. Turner 75 acres, Lot 18, Kilbuck Township, is a good gas well. The Ohio Fuel Gas Co. is drilling a test in the southwest corner of the C. P. Allison 40 acres, Lot 12. In Richland Township, the East Ohio Gas Co. is drilling a wildcat in the southeast corner of the George L. Strouse 100 acres, Lot 24, and the Klise-Eckstein-McCann Co. is starting a test in the southwest corner of the Rose Bricker 40 acres, Lot 17. The East Ohio Gas Co. staked a location for No. 2 in the northeast corner of the J. E. and M. Miller 146 acres, Lot 15 Hardy Township. This lease is on the map as the Oscar Steel farm.

In Brown Township, Knox County, the Upham Gas Co. is drilling a test in the northwest corner of the George Lifer 52 acres, Section 14.

In Hanover Township, Ashland County, the East Ohio Gas Co. is drilling a second test on the J. H. Miller, Section 27, and the Ohio Fuel Gas Co. made a location for a test in the northwest corner of the M. C. Letherow 20 acres, same section. In Sullivan Township the Klise-Eckstein-McCann Co. is drilling No. 3 in the southeast corner of the J. A. Spencer 34 acres, Lot 3.

Hulse & Kundtz have made a location for a wildcat venture in the southeast corner of the Ray Arnold 104 acres, Lot 2, Troy Township, Ashland County, and the Logan Gas Co. is drilling one of the same kind at a test in the northeast corner of the John Moore 160 acres, Lot 19, Lake Township, same county.

In Medina County, York Township, the Logan Gas Co.'s test in the northeast corner of the Frank Patlowany 87 acres, Section 2, is an average gas well after given a 20-quart shot. Hulse & Kundtz drilled a dry hole in the southwest corner of the Frederick Baker 53 acres, Section 24, same township. In Litchfield Township, the Globe Oil & Gas Co. is drilling No. 1 in the northwest corner of the George Kennedy 50 acres, Lot 55. In Liverpool Township, the Empire Gas & Fuel Co. staked a location for a test in the center of the east and west lines and 325 feet from the north line of the Charles Kinzey 41 acres, Section 3. The same company made a location for a test in the northeast corner of the Thomas Sylvester 100 acres, Lot 38, Granger Township, and the Ohio Fuel Gas Co. is drilling a test in the southwest corner of the Delpha J. Hitchcock 55 acres, Section 17, Brunswick Township.

In Wayne County, Milton Township, the East Ohio Gas Co. is drilling a test in the northeast corner of the A. and E. Bodager 80 acres, Section 26, and No. 1 in the southeast corner of the B. Mibach 153 acres, Section 20. In Congress Township, the Logan Gas Co. is drilling No. 1 in the northwest corner of the E. K. Weltman 40 acres, Section 33. Warren Palmer and others are drilling No. 3 in the southeast corner of the Barton Ginter 73 acres, Section 36, and the Arco is doing the same with its test in the northeast corner of the Elijah Ginter 74 acres, same section. In Cannan Township, Butler Brothers are drilling No. 4 on the Daniel Wiles 40 acres, Section 21. In Chester Township, the Logan Gas Co. staked a wildcat location in the southwest corner of the D. Hohenshil 79 acres, Section 28.

In Athens County, Carthage Township, the Logan Gas Co. failed to find either oil or gas at a second test in the southwest corner of the S. A. Wilson 180 acres, Lot 35. Same company is drilling No. 1 in the northwest corner of the Issac Bail 44 acres, Lot 32; and No. 2, on the Eaton Chase 120 acres, Lot 3, made a location for a test in the northwest corner of the Isaac & Elva Pierce 45 acres, Lot 25. E. A. Sweeney and others are drilling No. 2 in the southwest corner of the Marguret Rowan 123 acres, Lot 6. In Waterloo Township, the Logan Gas Co. is drilling a test in the southeast corner of the P. C. Shaulis 82 acres, Section 7. In Lodi Township, same county, the Ohio Fuel Supply Co. got a duster at a test on the George H. Williams, Section 25. In Cannan Township, Daily and Son are drilling a test in the northwest corner of the Joseph Robinson 68 acres, Section 30.

In Coshocton County, Newcastle Township, Cassingham & Bell Brothers' No. 14 Cassingham 163 acres, Lot 5, proved a duster and No. 15 well, 550 feet from the north line and 1,300 feet from the east line of the same farm, is drilling. In Monroe Township, same county, the Ohio Oil Co.'s test in the northwest corner of the Guy Pyres 100 acres, Lot 8, is reported dry and the same company is starting another test in the northwest corner of the Robert McKelvey 39 acres, Lot 2.

Close to a dozen strings of tools are now working in Dover Township, Cuyahoga County, in the Cleveland Field, which is having a renewal of the boom of a few years ago. Hulse & Kundtz have drilled in a good gas well at a test 50 feet from the north line and 1,000 fee from the west line of the James Jenkins 30 acres, Lot 28, and are drilling No. 1 on another James Jenkins 13 acres, in Lot 18, located 200 feet west of the highway and in the center of the north and south lines of the tract. Arthur & Simpson are drilling No. 1 in the northeast corner of the H. Martin 30 acres, Lot 16. McGrath and others are doing the same at their No. 1 in the northwest corner of the P. Hough 15 acres, Section 18. The Ohio Pipe & Supply Co. staked a location for a well in the southwest corner of the E. Price 6 acres, Lot 19. Dempsey Brothers are drilling No. 1 in the northeast corner of the J. Gessner, Lot 28, and starting No. 1 in the northwest corner of the H. F. Eyring 2 acres, Lot 18. In Strongville Township, same county, Dillon & McFrederick Brothers are at work at a test in the southeast corner of the K. W. Grieb 26 acres, Lot 58.

In Richfield Township, Summitt County, Hulse and Kundtz are drilling a wildcat in the northwest corner of the Ella J. Mayer 90 acres, Section 4.

Offside Wells

In Dunham Township, Washington County, the Logan Gas Co. is credited with a dry hole in the Berea sand at a test on the W. M. Matheny farm, Lot 17, and a nice gas well at a test on the W. D. Breckenridge farm, Lot 9, Barlow Township, same county.

In Warren Township, Washington County, Starr and others have a fair gas well at a test on the Lee N. Thomas farm, Lot 5, in the Maxon sand. The Ohio Fuel Supply Co. has a good gas well at a test on the C. E. Orminston farm, Lot 22, Barlow Township.

EASTERN FIELDS

(Continued from Page 60)

Injun sand at a test on the Julia M. Egnor farm.

In Washington district, Boone County, the South Penn Oil Co. is drilling a test on the Bertha Goldbarth farm. In Crook district, the United Fuel Gas Co. is fishing at 1,725 feet on the T. W. Bedford heirs farm. The Pure Oil Co. is delayed for the same reason at a second test on the Jacob D. Coon farm, in Sherman district. In McComas district, Cabell County, C. C. Wolf & Co. are due in the Berea grit on the B. L. Browning farm. In

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ALTON, ILLINOIS

Grant district, the Aetna Oil & Gas Co. is drilling a test on the P. H. Reynolds farm. The same company has started to drill a second test on the A. C. Chaney farm.

In Union district, Pleasants County, L. C. White has started to drill on the L. J. Gardner farm. In Washington district, the New York Petroleum Co. has started to drill on the Catherine Ingraham farm. In Union district, Lincoln County, Roy & McComas are rigging up on the Randolph Sias farm. In Carroll district, the Grant Gas Co. is building a rig on the Everett and P. Vickers farm. In Duval district, E. R. Cameron is rigging up on the George P. Alderman farm. In Credo district, Wayne County, the Jeffery-Dewitt Insulator Co. is drilling a test on its own property.

In Otter district, Braxton county, J. H. Gaines is rigging up at a test on the C. L. Engle farm. In Center district, Gilmer County, McIntosh has started to drill on the A. L. Holt & Co. farm. In Union district, Tyler County, Albert Neely has started to drill on the William Rice farm. In the same district, Morgan Brothers are rigging up on the Neeley Wickham farm. In Simpson district, Harrison County, the Clarksburg Light & Heat Co. is building a rig on the H. G. and A. A. Lang farm and has made a location on the Mary Bramer farm. In Ten Mile district, J. W. Johnson has started to drill on the Otto O. Westfall farm. In Elk district, the Grasselli Chemical Co. has a rig up on the William H. Rymer farm.

In the lower West Virginia counties, operators are doing considerable test work, some of the wells drilling and starting are wildcats. Boone County is well to the front with this kind of work. In Sherman district, Godfrey L. Cabot is drilling tests on the William Thompson & Co. farm and the Laurel Creek Fuel Co.'s property. In the same district, Holstead and others are drilling on the White, Hopkins & White property and the J. Meadows farm. Ira G. Sayer is drilling at 2,020 feet on the D. B. Banks farm.

In Logan district, Logan County, the Pure Oil Co. is drilling on the D. W. Bone farm. Zonheimer & Gibbs are drilling on the Cole-Crane property. In Scott district, Putnam County, Thompson, Shannon & Co. are drilling on the Parker School House lot. In Grant district, Cabell County, the Harshbarger Oil & Gas Co. is due in the Big Injun sand on the E. E. and C. L. Harshbarger farm. The Monickel Gas Co. is due in the same formation on the Charles Finley farm. In Harvey district, Mingo County, the Old Colony Oil Co. is beginning active operations on its large block of leases. At this time it has four wells drilling. In McComas district, Cabell County, Farr & Figley are drilling on the C. A. Wetherholt farm. In Union district, Wayne County, the Chartiers Oil Co. is due in the Big Injun sand on the Ella McGhee farm.

In Ten Mile district, Harrison County, the Hampton Oil Co. is building a rig on the J. W. Williams farm. In Coal district, the Clarksburg Light & Heat Co. has made the location for a test on the S. D. Gore heirs farm. In Elk district, the Vesper Oil Co. is due in the Gordon sand on the Alva Stuttler farm. In the same district, the Grasselli Chemical Co. is drilling tests on the Emma Walker, William H. Rymer, Deroy Lance and John H. Stone farms.

On Green Creek, Harper district, Roane County, the Green Creek Oil & Gas Co. has a rig completed on the Bert Davis farm. On the Little Kanawha River, DeKalb district, Gilmer County, the Philadelphia Oil Co. has commenced drilling a second test on the P. W. Bartlett farm. On Big Root Creek, Sheridan district, Calhoun County, W. H. Bickel is building the rig for a second test on the Thomas Wolverton farm. In Union district, Tyler County, the Morgan Brothers Oil & Gas Co. has a rig up on the Neely Wickham farm. In Union district, Tyler County, E. E. Zinn and others have the rig completed for a test on the M. N. Prunty farm.

The southeastern Ohio fields completed light wells and dusters. In the Fisher Pool, Lot 74, Athens Township, Athens County, L. F. Bickel & Son have completed No. 5 on the G. C. Lawson farm good for 2 bbls. a day in the Berea grit. In Section 29, Alexander Township, the Biddle Oil & Gas Co. has completed and shot in the same formation No. 5 on the John F. Riddle heirs farm. It is a gasser good for 500,000 feet.

Deep Duster in Washington

In the northwest quarter of Section 7, Aurelius Township, Washington County, the Washington and Noble County Oil & Gas Co. has drilled its test on the A. J. Longfellow farm through the Niagara lime to a total depth of 4,260 feet. It is a duster in all formations and abandoned. In the southeast quarter of Section 18, Killbuck Township, Holmes County, the Kemrow company has drilled its test on the M. A. Snow farm through the Clinton sand. At 40 feet in the sand a light show of oil was developed but it will probably go into the discard as a duster.

Week-end Completions

At the close of the week of development work, the deep sand territory in southeastern Ohio completed two good producers. The better of the two is the Hope Construction & Refining Co.'s test on the James Uffner farm, in the northeast quarter of Section 23, Hopewell Township, Licking County. After drilled through and shot in the Clinton sand the well produced 115 bbls. the first 24 hours.

In the northeast quarter of Section 4, Jackson Township, Muskingum County, the Pure Oil Co. completed and shot in the Clinton sand a second test on the Jennie Moore farm. It produced 82 bbls. the first 24 hours.

In the southeast quarter of Section 9, Bowling Green Township, Licking County, the Midland Oil Co.'s test on the Ella Sinsbaugh farm is a very light pumper in the Berea grit. In Section 13, Franklin Township, the Detex Oil Co. and others have completed No. 8 on the Otto Franks farm. The hole filled up 150 feet with fluid and is showing for the same kind of a pumper.

At Jerseyville, Section 19, Lodi Township, Athens County, the Ohio Fuel Gas Co.'s test on the George H. Williams farm is a duster in the Berea grit. In the northwest quarter of Section 27, Madison Township, Columbiana County, the Natural Gas Co. of West Virginia has a near duster at a test on the Thomas Lightner farm. It has been drilled through the Berea grit.

In Lot 7, Franklin Township, Licking County, Smith & Hazlett are drilling No. 6 on the Austin Orr farm to the Berea grit. In Lot 15, same township, A. J. Weidman & Co. are drilling No. 3 on the R. L. Tavener farm.

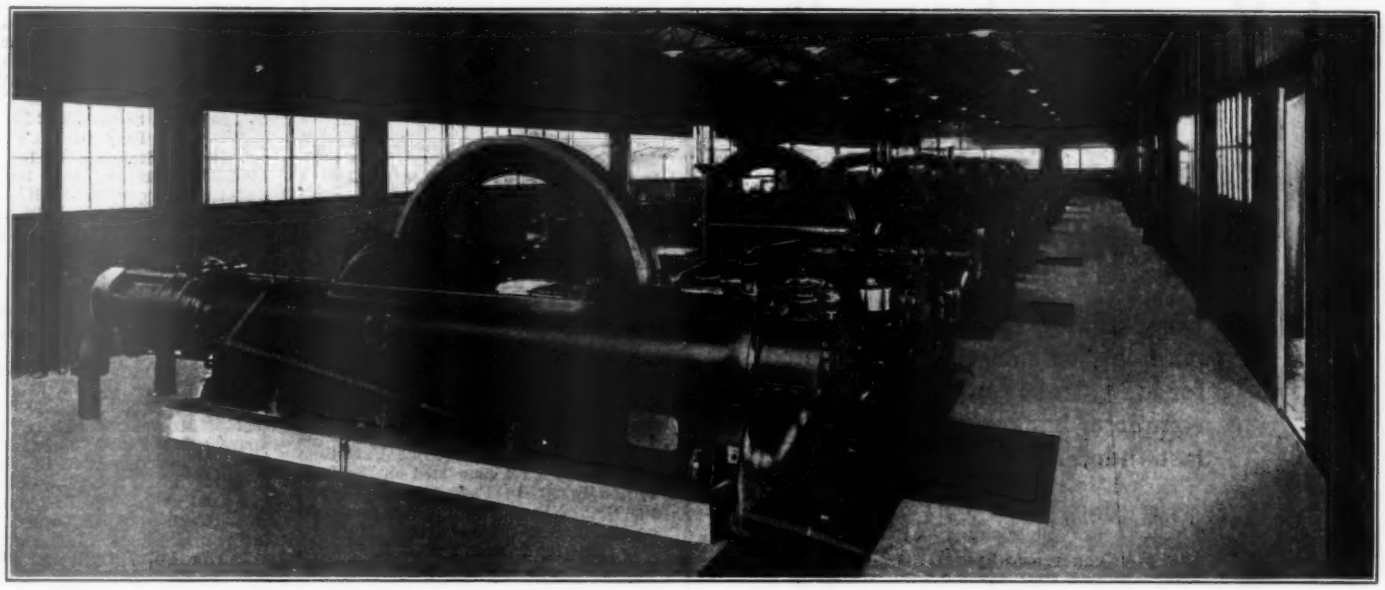
In Section 25, Washington Township, Hocking County, the Gordon Oil Co. completed in the Clinton sand No. 8 on the William Stone farm. It produced 45 bbls. the first 24 hours. In the northwest quarter of Section 11, Green Township, R. A. Duncan & Co.'s No. 3 on the G. H. Guess farm is dry and abandoned, having developed only a little gas in the Berea grit.

In Lot 34, Hardy Township, Holmes County, The Pure Oil Co. has completed and shot in the Clinton sand its test on the Elizabeth Uhl farm. It will probably make a 4 or 5-bbl. pumper. In Rush Creek Township, Fairfield County, J. F. Thompson and others have completed a test on the Edward Thompson heirs farm. It is a gasser in the Clinton sand good for 500.000 feet.

Duster in Washington County

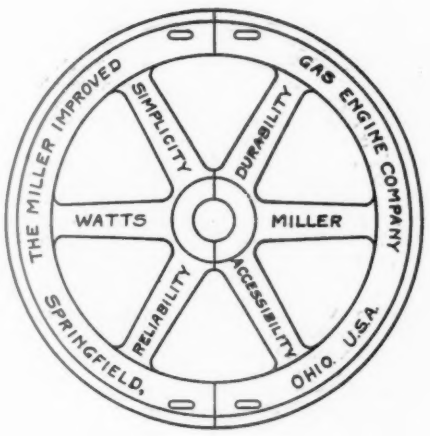
In Section 19, Liberty Township, Washington County, W. P. Beeson & Co.'s second test on the George B. Epley farm is a duster in the second Cow Run sand. In Section 21, Knox Township, Columbiana County, John N. Davidson's No. 6, on the John N. Davidson farm, is a light pumper in the Berea grit.

In Lot 24, Newton Township, Licking County, the Ohio Fuel Supply Co. completed in the Berea grit No. 5 on the Orrin Forry farm good for 27 bbls. a day. In Lot 35, same township, Roy B. Decker and others have completed in the Berea grit a test on the James McKinney farm.



Watts-Miller Gas Engine Driven Gas Compressor Units

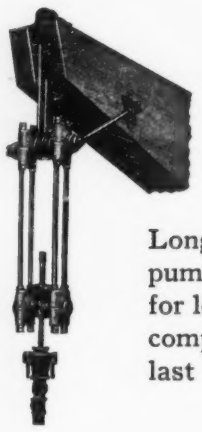
225 Horse Power Units



To build the best possible Gas Engine equipment, and to service it with customers' needs in view, has been our aim for thirty years.

The Miller Improved Gas Engine Company
Springfield, Ohio

Lightning Well Tools and Pumping Specialties



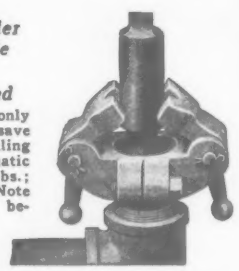
Emery Lightning All-Steel Hanger

Long Stroke Beam Hanger for pumping wells. Especially adapted for long stroke pumpers. The most complete hanger made and will last indefinitely. Full adjustment.

Sucker Rod Spider and Bell Nipple Combined

Open and Closed

With this you need only one elevator and save 50% of your pulling time. Action automatic and sure. 2-in., 10 lbs.; 2½-in., 15 lbs. Note high speed elevator below.



High Speed Elevator

For use with Sucker Rod Spider. The most satisfactory rod pulling outfit made. Avoids bent rods and lost time. Rods cradle in elevator body and will not kink or release accidentally. Snaps on as naturally as placing your hat on your head.

Light pattern, 12 lbs.
Heavy pattern, 15 lbs.

Stuffing Box

The Lightning T. S. Lubricator Stuffing Box satisfies under the most adverse conditions.

The Lightning V-Swing

Self Oiling

For heavy duty work. Weight 380 lbs.

V-Swing is adjustable so that legs may be at 90° or closed to 45°.

Rod and Tubing Hook

All-Steel, Extra Heavy. Ball bearing swivel, automatic safety latch and hinged body.

Made in 3 sizes, 24", 30", 34".

Manufacturers of

Pumping Powers,
Geared and Band Wheel
Stuffing Boxes
Steel Grips
V-Swings, Jacks
Polished Rod Rotators
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Stocks for Delivery at These Points:

Wichita Falls, Texas
GROVER C. JOHNSON
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HARRY B. SHINE
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Write for showing of full line.

Kansas City Hay Press Co., Kansas City, Missouri

It is a duster. In Lot 4, Chatham Township, Medina County, E. R. Edson, Son & Co. completed No. 23 on the Carl G. Packard farm. It is a light pumper, good for 2½ bbls.

In Monroe Township, Perry County, the Pure Oil Co. is drilling a test on the Edward Thomas farm. In Harrison Township there is considerable test work under way. Perry Sturm is drilling on the Friehl heirs' farm; Cline Bothers on the J. W. Guy farm; and Leonard Oil & Gas Co. on the Mary Butto and George Allen farms. In Pike Township, Ralph Brothers have the rig completed for a second test on the Florence Cookson farm. The Standard-Hocking Coal Co. is drilling another test on the Standard-Hocking Coal Co.'s property.

Hocking County

In Falls Township, Hocking County, the Calico Ridge Oil & Gas Co. has drilled a test on the Funk farm to a depth of 2,450 feet and shut down. In Starr Township, the Preston Oil Co. is building the rig for a second test on the G. F. Wyskiver farm. In Washington Township, Cline, Vensel & Co. have a rig up on the W. R. Thrush farm. The Rauber Oil & Gas Co. is fishing at a second test on the Emily Thrush farm. In Starr Township, the Ohio Fuel Supply Co. has a rig completed on the Lulu Poston farm. In Falls Gore Township, the Griffin Producing Co. has a rig up on the Robert Tucker farm. In Green Township, the Preston Oil Co. has started to drill on the Almeda Linton farm. R. A. Duncan & Co. are drilling on the G. H. Guess farm.

F. M. Rugg & Co. have completed No. 7 on the Clinton S. McKinney farm, in Lot 26, Newton Township, Licking County. It is a natural producer in the Berea grit good for 30 bbls. a day. In the northwest quarter of Section 19, Sutton Township, Meigs County, Simon Lebow & Co. have started to drill No. 4 on the Charles and Frances Holter farm.

Southwest Pennsylvania

The southwest Pennsylvania fields have dropped back to nothing better than light pumpers. However, in Morris Township, Greene County, there are several wells due in the Gordon sand that are favorably located for good producers. The production from Greene County was greater during the month of July than for any month in the past four years, due to the large wells completed in Morris Township.

In Perry Township, the Carnegie Natural Gas Co. has completed through the Gordon sand a test on the F. M. Haynes farm. It is dry and abandoned. In Dunkard Township, Olive Oil & Gas Co. has drilled a test on the P. J. R. Sicklesmith farm through the Dunkard sand, depth 670 feet. It is a very light pumper.

In the old Wildwood district, Allegheny County, Parker & Co. have completed No. 4 on the Samuel Wallace farm good for 2 bbls. a day. In the Ingomar district, Marshall Township, S. A. Pinkerton and others completed a test on the George Williby farm good for 4 bbls. a day. In the same township, McClay & Co. have a duster at a test on the James Dean farm.

In Findlay Township, Allegheny County, S. S. Ferguson & Son have completed a test on the S. S. Ferguson farm good for about 2 bbls. a day. In Marshall Township, Elliott & Co. have completed a very light pumper on the Elliott farm.

On Campbell Hill, near Tidioute, the Fidelity Petroleum Co., composed of Baltimore capitalists, is drilling a deep test in very old territory. They have reached a depth of 4,500 feet and are drilling in a lime formation. Walter Charlesworth is in charge of the drilling of this well. So far as known they have now reached a greater depth than any other ever drilled in that locality. It is being closely watched and if it comes in a producer will create a sensation in that section.

KANSAS FIELDS

(Continued from Page 48)

and made 15 bbls. after a shot of 80 quarts. Murphy and others have a rig up for No. 2 Green, SW cor. NW NW, Section 14-23-9. Roth and others have a rig up for No. 1 Martindale, SE cor. SE, Section 30-23-10. White Drilling Co.'s No. 1, NE cor. SW SE, Section 13-22-11, is drilling at 1,550 feet. Empire Gas & Fuel Co.'s No. 12 Trom, NW cor. NW SE, Section 14-22-11, is drilling at 500 feet. York State Oil Co.'s No. 3, SE cor. SW NW, Section 32-22-11, is spudded. Simons and others have rigged up No. 6 Frankhouser, NE cor. NW SE, Section 4-22-12. The rig is up for No. 4 Frankhouser, SW cor. NE SW, Section 4-22-12. Phillips Petroleum Co.'s No. 3, SW cor. NE, Section 5-22-12, is drilling at 900 feet. Pure Oil Co.'s No. 5, NE cor. SE SE, Section 8-23-11, had sand at 1,967-2,003 feet and made 50 bbls. after a shot of 160 quarts. Skelly Oil Co. and others' No. 1, NE cor. SW, Section 29-23-11, is dry and abandoned at 2,080 feet. Prairie Oil & Gas Co.'s No. 1, SE cor. SE, Section 7-24-11, is drilling at 600 feet. Manhattan Oil Co. and Phillips Petroleum Co.'s No. 2 Freeman, SE cor. NW NE, Section 19-24-11, is drilling at 2,090 feet.

Haverhill Petroleum Co.'s No. 11, CNL SE SE, Section 4-23-13, had sand at 1,578-1,614 feet and made 30 bbls. after a shot of 120 quarts. Theta Oil Co. has a machine up for No. 23 Schneider, CWL NW NW, Section 10-23-13. Mission Oil Co.'s No. 8, CWL NW, Section 27-23-13, had sand at 2,100-30 feet and made 120 bbls. oil and 30 bbls. water. Mid-Continent Petroleum Co. has rigged up a machine for No. 7 Dillinger, NW cor. SE NE, Section 28-23-13. Phillips Petroleum Co.'s No. 1, SE cor. NE Section 25-24-10, had sand at 1,823-48 feet and made 250 bbls. after a shot of 90 quarts. The rig is on the ground for No. 3 Nixon, NE cor. SE SE, Section 25-24-10. E. H. Cornelius and others have spudded No. 1 Erickson, SE cor. SW NE, Section 31-25-10. Roth and others' No. 2 Welch, SW cor. NW NE, Section 13-25-8, is rigged up. Independent Oil & Gas Co. and others have a rig up for No. 1 Jackson, SW cor. NE NE, Section 23-25-8. Manhattan Oil Co. and Phillips Petroleum Co.'s No. 3, SW cor. NE NE, Section 19-24-11, had sand at 1,823-46 feet and made 350 bbls. after a shot of 60 quarts. The rig is up for No. 4 Freeman, SE cor. NE NE, Section 19-24-11. A rig is also up for No. 4 Carpenter, NE cor. SE NE, Section 19-24-11. White Eagle Oil Co. and Ritchie & Moore's No. 6, NE cor. NW SE, Section 19-24-11, is dry and abandoned at 2,127 feet. Ward McGinnis and others have completed No. 6, SW cor. NE SW, Section 30-24-11, had sand at 1,819-47 feet and made 200 bbls. after a shot of 100 quarts. No. 9-B, NW cor. SW, Section 30-24-11, is spudded. Cornish and others have abandoned the location for No. 3, NE cor. SW SE, Section 31-24-13. Christy and others are drilling at 975 feet in No. 1 Dimmie, SE cor. SW, Section 31-24-13. Tidal Oil Co. has spudded No. 12 Hull, CEL SW SW, Section 2-26-8. Continental Oil Co. has spudded No. 3, NE cor. NE, Section 23-26-9. Mississippi Valley Oil Co.'s No. 1 Hickman, NE cor. NW, Section 5-26-10, is spudded. Paid & Parker have abandoned the location for No. 1, SW cor. SW, Section 9-26-10. A. E. Griffith and others have a rig up for No. 1 Weaver, SE cor. NW, Section 7-27-10.

Lyon County

Wilson and others' No. 1, NW cor. SW NE, Section 35-19-11, is dry and abandoned at 2,058 feet. McCulloch Oil Co. and others' No. 2, SW cor. NW NE, Section 25-21-10, is drilling at 500 feet. Transcontinental Oil Co.'s No. 6, NE cor. NW NW, Section 31-21-10, had sand at 2,159-2,204 feet and made 75 bbls. after a shot of 125 quarts.

Chase County

Chris Sheedy has the rig up for No. 1 Owens, SW cor. NE, Section 13-21-9.

Cowley County

In the Rainbow Bend district, the Barnsdall Oil Co. and others' No. 4, SW cor. NW NW, Section 28-33-3, had sand at 3,247-77 feet and made 40 bbls.

Lyon County

Transcontinental Oil Co.'s No. 6, NE cor. SW SW, Section 30-21-10, is drilling at 500 feet.

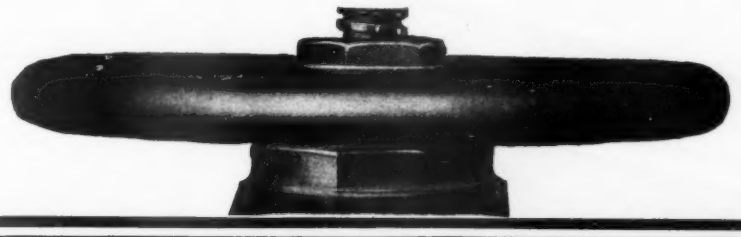

Fig. 125 Pratt & Cady Standard Iron Body Gate Valves

Standard Iron Body Gate Valve— Far More than Standard Service

The Fig. 125 Pratt & Cady Standard Iron Body Gate Valve is built of high test cast iron following a special Pratt & Cady formula, which has a tensile strength of 33,000 pounds per square inch. This is 50% greater strength than required by the American Society for Testing Materials. It is unusual to find such high grade material in standard iron body valves.

The Fig. 125 is tested to 300 pounds—will meet requirements of working steam up to 125 pounds—and working water to 150 pounds.

This wide margin of additional strength fully provides against strains due to improper support of pipe line or insufficient provision for expansion.

The Fig. 125 is constructed with rising spindle in both flanged and screwed types in sizes from 2 to 24 inches. Bronze trim. Bronze face wedge, either solid or split type, is reversible—increasing length of life and reducing upkeep.

The same general type of valve is offered in Pratt & Cady Underwriter pattern or all iron construction.

Extraordinary strength of the Fig. 125 recommends it as an exceptionally dependable and economical valve in important refinery installations where nothing may be left to chance, and the best possible equipment is specified as a matter of course.

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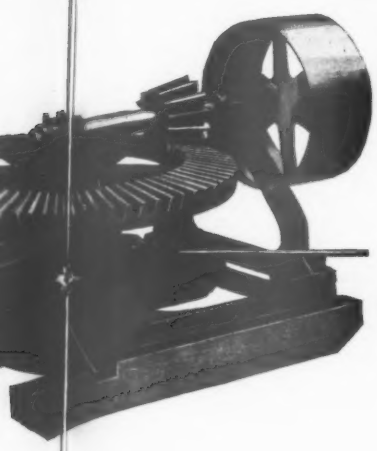

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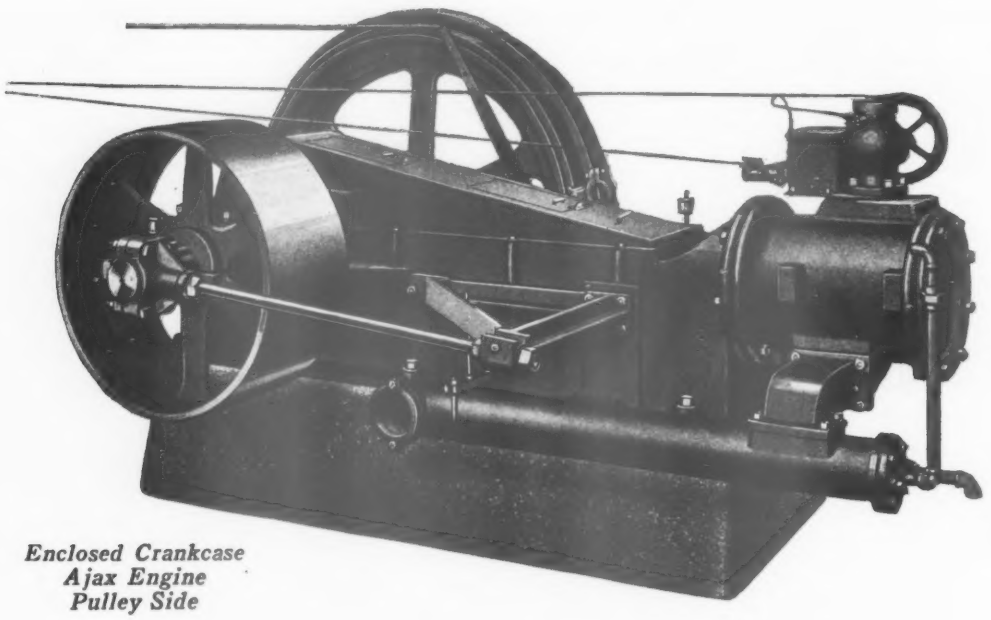

Enclosed Crankcase
Ajax Engine
Pulley Side

The Famous Ajax Drilling Engine
Now
With *Enclosed* Crankcase

The long series of important drilling engine improvements in recent years are Ajax improvements.

Interchangeable parts—the roller link reverse—the use of finer steels, heat treatment—precision workmanship—hardened and ground crankshafts—outboard bearings—all these were first introduced by *Ajax*.

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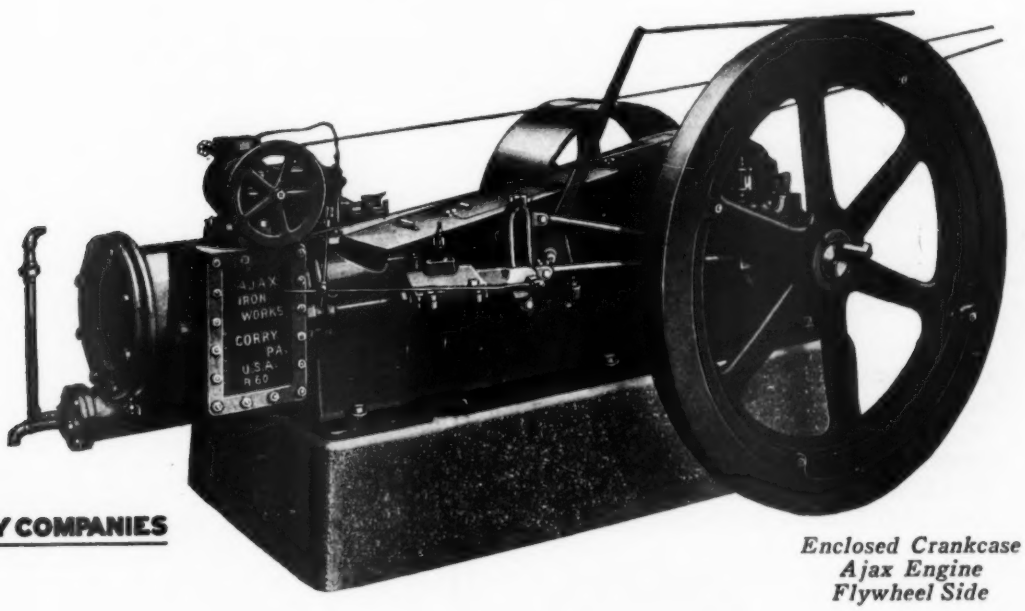
"Save us time—every second counts in bringing in a well."

Oil producers said this to us. Our reply is the new *Enclosed Crankcase* Ajax Engine. (Sizes 13x14 and 14x14).

A big, powerful engine. Use larger pulleys, more effective gear ratios with it. It will save its cost in bailing time. It has the power to handle a mile-long string of tools—and handle it faster.

Counter-balanced crankshaft. Doesn't vibrate or break off holding-down bolts and crawl away. Uses its power making hole.

It's the engine *you* need.



Enclosed Crankcase Ajax Engine Flywheel Side

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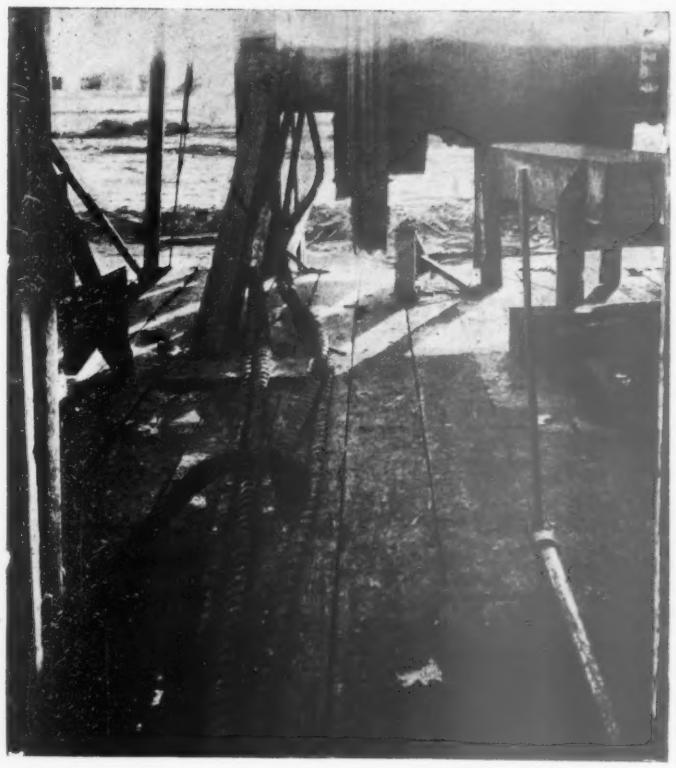

Months Ago this bull rope paid for itself

Every day's service is a complete saving with these PLYMOUTH MANILA BULL ROPES. They have been continuously in service for *two years and four months* at the Tonkawa Pool—and still show no signs of giving up, on July 15, 1926.

This is the kind of bulldog tenacity that users have learned to expect of PLYMOUTH MANILA OIL-WELL CORDAGE. In every field the name PLYMOUTH stands for true Economy.

Quick delivery from all stores of the Oil Well Supply Company.

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PLYMOUTH CORDAGE COMPANY
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OIL WELL SUPPLY COMPANY
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Stores in All Oil Fields

OKLAHOMA FIELDS

(Continued from Page 48)

SE, Section 3-17-9, is drilling at 650 feet. Roxana Petroleum Corp.'s No. 2, NE cor. NW NE, Section 10-17-9, is drilling at 600 feet. H. F. Wilcox Oil & Gas Co.'s No. 1, NW cor. NE NE, Section 10-17-9, is drilling at 475 feet. Westland Oil Co.'s No. 2, SW cor. NW, Section 22-17-9, is drilling at 200 feet. McCulloch Oil Co.'s No. 1, NE cor. SW, Section 24-17-9, is drilling at 3,470 feet. Independent Oil & Gas Co.'s No. 1, NW cor. NE NW, Section 8-17-10, had sand at 2,998-3,024 feet and swabbed 280 bbls. the first 12 hours.

Darkenwald-Perry's No. 1, SW cor. NW, Section 10-17-10, had the Oswego lime at 1,545-52 feet with 250 feet of oil in the hole which did not lower after constant bailing. McCulloch Oil Co. has a rig on the ground for No. 1 Jaconton, CSL SW SE, Section 13-17-10. Pioneer Petroleum Co. is rigging up No. 9 Bucktrot, SE cor. SW NE, Section 24-17-10. Mid-Continent Petroleum Corp.'s No. 1, C S half NW SW, Section 24-17-10, had sand at 1,788-1,831 feet and made 20 bbls. after a shot of 80 quarts. Pioneer Petroleum Co.'s No. 10 Bucktrot, CNL NW NE, Section 24-17-10, is rigging up. J. H. Wright's No. 12, NE cor. SW, Section 24-17-10, had sand at 2,437-78 feet and made 50 bbls.

J. H. Wright's No. 10, NE cor. SW SE, Section 24-17-10, is drilling at 350 feet. No. 11, CNL NW SE, Section 24-17-10, had sand at 2,380-2,415 feet and made 110 bbls. Love & Myers have spudded No. 1-A, NE cor. SE NW, Section 21-16-9. Williams & Cole's No. 1, SE cor. NW, Section 8-16-10, is dry and abandoned at 3,240 feet.

Magnolia Petroleum Co.'s No. 18, C SE SE, Section 6-18-7, had sand at 2,548-56 feet and made 20 bbls. after a shot of 100 quarts. C. G. Tibbens is drilling at 600 feet in No. 2, SE cor. NW, Section 25-15-8. Producers & Refiners Co. has a rig on the ground for No. 1 Brown, SW cor. SW, Section 1-14-8. Shaffer Oil Co. has spudded No. 1, NE cor. NW NW, Section 17-14-8. C. G. Tibbens has spudded No. 12, CNL NW SE, Section 26-14-8. No. 1, SE cor. NE NW, Section 30-15-9, had the Layton sand at 1,262-88 feet and made 40 bbls. naturally. No. 3, SE cor. SW SW, Section 30-15-9, had sand at 2,296-2,340 feet and made 25 bbls. after a shot of 120 quarts. No. 1, SW cor. SE, Section 32-15-9, is drilling at 300 feet. Wood Oil Co.'s No. 1, NW cor. NE, Section 36-14-9, is showing for 5,000,000 feet of gas at 3,020 feet. Atlantic Oil Producing Co. has abandoned the location for No. 4, SE cor. SW SE, Section 17-14-10. T. B. Slick's No. 2, NE cor. NW NE, Section 20-14-10, had sand at 3,421-35 feet and made 45 bbls. naturally. It was shot with 15 quarts and made 100 bbls. Plymouth Petroleum Co.'s No. 1, SW cor. SE, Section 23-14-10, is dry and abandoned at 3,274 feet. Magnolia Petroleum Co.'s No. 4, NW cor. SE SW, Section 32-19-7, is dry and abandoned at 3,960 feet. Mann & Bartlett's No. 2, CWL SW NE, Section 5-19-8, had sand at 1,963-80 feet and made 10 bbls. after a shot of 50 quarts. Burlingame & Sharp's No. 8, NE cor. SW NW, Section 13-19-8, had sand at 2,371-2,400 feet and made 100 bbls. after a shot of 10 quarts. Gled Oil Co. has spudded No. 5, NE cor. NW SW, Section 13-19-8. The Texas Company's No. 2, CWL SW SE, Section 13-19-8, had sand at 2,189-2,225 feet and made 210 bbls. after a shot of 80 quarts. Dixie Oil Co.'s No. 1, NW cor. SW, Section 12-18-7, is dry and abandoned at 3,670 feet. Magnolia Petroleum Co.'s No. 28, SE cor. NW NW, Section 16-18-7, had sand at 2,500-35 feet and made 25 bbls. naturally. Shaffer Oil Co. has spudded No. 10-A, SE cor. SW, Section 32-18-7. Roxana Petroleum Corp.'s No. 1, NW cor. SW NE, Section 18-19-9, had sand at 2,984-89 feet and made 721 bbls. Selby Oil & Gas Co.'s No. 1, C SW SE, Section 31-19-9, had sand at 3,085-3,108 feet and made 35 bbls. after a shot of 50 quarts. The Texas Company's No. 2, SW cor. NW SE, Section 10-19-10, is making 6,000,000 feet of gas at 1,840 feet. Glidden and others' No. 1, SW cor. SE SW, Section 14-19-10, made 20 bbls. from sand at 2,320-70 feet. W. E. Brown's No. 5, NE cor. SE SW, Section 23-18-10, is dry and abandoned at 1,926 feet. No. 4, NW cor. SE SW, Section 23-19-10, had sand at 1,857-95 feet and made 75 bbls. after a shot of 240 quarts. Red Bank Oil Co.'s No. 3, NE cor. SW SW, Section 23-19-10, is dry and abandoned at 2,620 feet. McCulloch Oil Co.'s No. 1, SE cor. SE, Section 20-18-9, is dry and abandoned at 3,202 feet. is rigging. No. 9, NE cor. NW, Section 20-5s-1, is drilling at 800 feet. No. 21, SW cor. NE, Section 28-5s-1, is pumping 25 bbls. from broken sands at 1,115-65 feet.

McIntosh County

Beggs Oil & Gas Co.'s No. 1, SW cor. SW, Section 2-12-15, had sand 1,770-79 feet with 500,000 feet of gas. It is shut in and completed. Gilcrease Oil Co.'s No. 1, SW cor. NW SW, Section 35-12-15, is drilling at 900 feet.

Muskogee County

Jolly & Ogg's No. 1, CWL NE NW, Section 2-14-18, had sand at 1,226-40 feet and made 75 bbls. after a shot of 60 quarts. C. M. Bradley's No. 1, C N half, NW SW, Section 5-14-19, had sand at 707-715 feet and made 120 bbls. naturally.

Okmulgee County

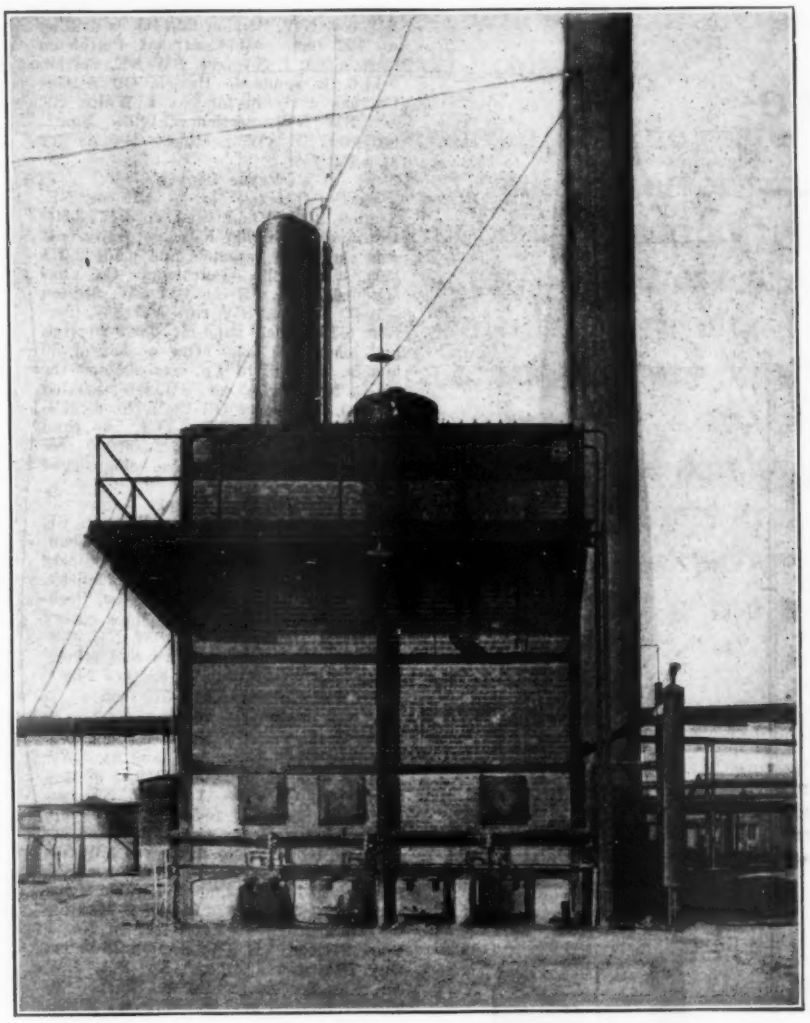
The Texas Company's No. 10 Bruner, CSL SE SE, Section 16-15-14, is a rig. No. 9 Bruner, SW cor. SE SE, Section 16-15-14, is rigging up. C. L. McMahon has a machine on the ground for No. 1, SE cor. NE SW, Section 16-15-14. J. L. Selby's No. 19 Anderson, C S half NE NW, Section 35-14-14, had sand at 1,147-70 feet and made 25 bbls. after a shot of 80 quarts. King & Jackson's No. 4 Haynes, CNL SE SW, Section 11-13-12, is rigging up. O. O. Buckles is drilling at 400 feet in No. 1, NW cor. NW, Section 5-11-12. L. C. Decius' No. 3, NE cor. SE NE, Section 17-11-12, is dry and abandoned at 2,691 feet. W. B. Pine has a rig on the ground for No. 1 Burgess, NE cor. SW SW, Section 17-12-13. Tiger Mountain Oil Co.'s No. 1, NE cor. SE SE, Section 10-11-13, had sand at 2,965-85 feet with 1,500,000 feet of gas.

Shaffer Oil Co.'s No. 9, SW cor. SE SE, Section 17-15-11, had sand at 2,950-80 feet and made 415 bbls. after a shot of 60 quarts. No. 2, NW cor. NE NE, Section 20-15-11, is dry and abandoned at 3,060 feet. J. J. Schock's No. 1, NE cor. SE NE, Section 8-15-12, is spudded. J. H. Rebold's No. 4, SE cor. NW SE, Section 5-14-11, is dry at 2,526 feet. Phillips Petroleum Co. has the rig and tools in for No. 1 Smith, SE cor. NW NE, Section 4-14-12. Devonian Oil Co. and the Independent Oil & Gas Co. have a dry hole at 2,695 feet in No. 9, NE cor. SW SW, Section 7-15-13. Kirkland & Sons have spudded No. 1, C SE, Section 17-15-13. Transcontinental Oil Co. has the rig in for No. 1 Kelly, NE cor. SW, Section 3-15-14. W. B. Pine has a well in No. 1, NW cor. NW, Section 10-15-14. Sand was at 1,625-29 feet and the well is good for 25 bbls. It was plugged back from a total depth of 2,190 feet. McCulloch Oil Co. and Payne have a rig up for No. 2 Francis, CWL SW SW, Section 15-15-14. The Texas Company has spudded No. 8, SE cor. SE, Section 16-15-14. McCulloch Oil Co. has spudded No. 7, NE cor. NE, Section 21-15-14. No. 8, CNL NE NE, Section 21-15-14, is also spudded.

J. L. Selby's No. 3, NW cor. SE NW, Section 25-14-13, had sand at 1,750-52 feet with 5,000,000 feet of gas. It is drilling in sand at 1,753 feet. Future Development Co.'s No. 1-W, SW cor. NE SE, Section 9-14-14, is drilling at 650 feet. Chestnut & Smith's No. 17, CSL SW SE, Section 13-14-14, had sand at 1,017-82 feet and made 40 bbls. after a shot of 160 quarts. Perkins and others' No. 1-W, SE cor. NE NE, Section 20-14-14, is dry and abandoned at 778 feet. Prairie Oil & Gas Co.'s No. 2, SW cor. NW NW, Section 25-13-11, is dry and abandoned at 2,378 feet. Rebold Drilling Co.'s No. 2, CWL NE NE, Section 11-13-12, had sand at 2,765-88 feet and is completed for 1,500,000 feet of gas.

FOSTER

TUBE STILLS



Foster Tube Stills are rapidly replacing shell stills wherever refineries have investigated methods of increasing production and reducing costs. In over 500 installations, Foster Stills are obtaining greater yields of overhead distillate with less fuel consumption than is possible with older types of equipment.

Ordinary tube stills are used for light cuts of 20%, but Foster Tube Stills are successfully taking an overhead of 90% of the thruput without cracking.

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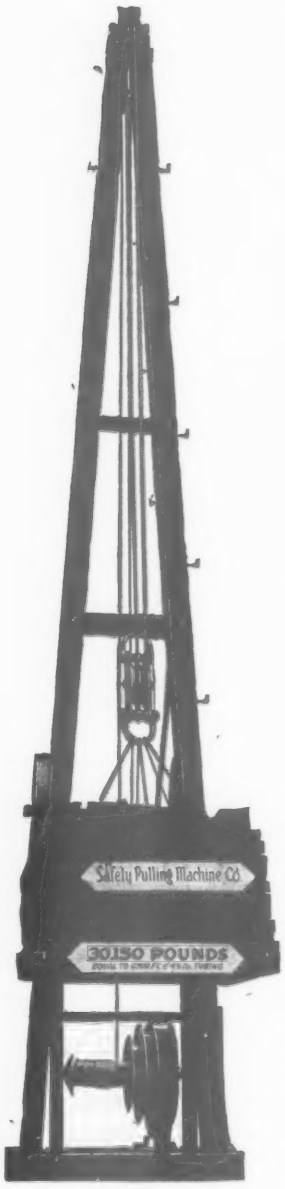

Specifications Deepwell

Eclipse Deepwell up to 8000 ft. 2" Tubing, Weight.....3645

Mast 8x10x36 ft., Douglass Fir A-Style Two Wheel Truck, two 16" Bronze bearing crown pulleys, 2½ Steel Pin mounted in malleable boxings. Large supporting plate 16" dia. between crown pulleys, eliminating any chance of bending pin.

Reel or Drum; 32 lb. 8¼ casing filled with concrete for winding drum, differentials banded with 3/16 band iron, brake surface 6"x40", choke brake style same as Star drilling machine.

The whole reel assembly is mounted on 2¾ square steel shaft extending clear through reel, secured by three heavy castings.

For sale by all Supply Companies

Manufactured by

SAFETY PULLING MACHINE COMPANY
INDEPENDENCE, KANSAS

Kessler Oil Co.'s No. 1, SE cor. NW SE, Section 32-13-12, is dry and abandoned at 3,175 feet. Cal-Cul Oil Co.'s No. 8, NW cor. SE SW, Section 15-13-14, had sand at 1,920-27 feet and made 40 bbls. after a shot of 10 quarts. Sims Oil Co.'s No. 17, CNL NE SW, Section 15-13-14, had sand at 2,450-59 feet and made 75 bbls. naturally and a show of water.

Lincoln County

Wentz Oil Co. has spudded No. 1, SW cor. SE, Section 34-17-2. Empire Gas & Fuel Co.'s No. 1, SE cor. SE, Section 16-15-4, has set 8-inch casing and standardized at 3,808 feet. T. B. Slick's No. 1, SW cor. NE, Section 7-14-4, had sand at 3,284-3,305 feet and made 30 bbls. naturally. Magnolia Petroleum Co. has rigged up No. 1 Gilliam, SW cor. SW, Section 8-14-4. No. 4, SE cor. NE SW, Section 8-15-6, is drilling at 200 feet. No. 5, SW cor. SW, Section 3-14-5, is drilling at 400 feet. No. 6, CEL SE NE, Section 4-14-5, had sand at 3,452-64 feet and made 20 bbls. after a shot of 40 quarts. The Texas Company's No. 1, SW cor. NW, Section 22-14-5, is drilling at 450 feet. Mid-Continent Petroleum Corp.'s No. 1, NW cor. SW NE, Section 9-14-6, is spudded. Prairie Oil & Gas Co. has a rig in for No. 1 White, SE cor. SW NW, Section 35-14-6. No. 1, SW cor. SE SW, Section 8-14-5, is dry at 4,433 feet.

Payne County

Shaffer Oil Co.'s No. 10, NE cor. NE, Section 2-18-5, had sand at 3,477-3,509 feet and made 600 bbls. naturally. It was shot with 5 quarts and made 2,071 bbls. Magnolia Petroleum Co. has spudded No. 1, SE cor. SW SW, Section 5-19-5. No. 4, SW cor. NE SW, Section 8-19-5, had sand at 3,019-20 feet, and made 110 bbls. after a shot of 30 quarts. Josey Oil Co. has skidded the rig in No. 5, NW cor. SW SW, Section 36-19-5. Mulberry Oil Co.'s No. 4, NW cor. NE NW, Section 5-17-4, had sand at 3,860-3,915 feet, with 2,500,000 feet of gas. Standard tools are being rigged up.

Jefferson County

Ely and others' No. 1, NW cor. SE SW, Section 4-6s-5w, is dry and abandoned at 510 feet. Siegler and others have a rig on the ground for No. 1 Seay, SE cor. SW SE, Section 34-6s-5w. Peckham and others have rigged up a rotary for No. 1 Dunn, NE cor. SW NE, Section 8-5s-8w. Schermerhorn and others' No. 1, NE cor. NW NW, Section 2-6s-1, is dry and abandoned at 1,310 feet.

Stephens County

Priddy and others' No. 4, NE cor. SW SE, Section 24-1-9w, had sand at 2,270-97 feet and made 6,500,000 feet of gas. Carter Oil Co.'s No. 1 Lister, NE cor. NW SE, Section 9-1s-5w, is rigged up. Magnolia Petroleum Co. has rigged up standard tools for No. 4 Brown, NW cor. NE, Section 3-2s-5w. No. 8, SE cor. SE, Section 25-1s-9w, pumped 40 bbls. from sand at 2,183-92 feet. Brown & McAllister are drilling at 1,400 feet in No. 1 Voss, SE cor. NE SW, Section 28-1s-8w. Guy Brown and others' No. 2-A, NW cor. SE, Section 28-1s-8w, pumped 30 bbls. from sand at 1,650-57 feet. Winkler & McQueen are running casing on top of the sand at 1,651 feet in No. 3 Nelson, SW cor. NE, Section 28-1s-8w.

Pontotoc County

Bolea and others have rigged up No. 1 Rayburn, SW cor. SE, Section 35-4-6. Lloyd and others' No. 1, NW cor. SE NE, Section 4-3-6, made 3,000,000 feet of gas in sand at 928-955 feet.

Garvin County

Sinclair Oil & Gas Co. is drilling at 400 feet in No. 1, SE cor. NW, Section 23-4-1. Magnolia Petroleum Co. has spudded No. 1, NW cor. SW NW, Section 12-3-1. Empire Gas & Fuel Co.'s No. 1, SE cor. NE NE, Section 27-2-1w, is dry and abandoned at 3,001 feet. Texas Pacific Coal & Oil Co.'s No. 5, NW cor. SE SE, Section 8-1-3w, had sand at 1,648-85 feet and pumped 45 bbls. The Texas Company's No. 1, NE cor. SE, Section 17-1-3w, had sand at 1,761-73 feet and flowed 85 bbls. through a packer.

Orr and others' No. 1, NE cor. NW, Section 24-10-25, is dry and abandoned at 3,134 feet.

Grady County

Stodgner and others are drilling at 500 feet in No. 7, C SW NE, Section 23-5-8w. Magnolia Petroleum Co.'s No. 1, C NW SE, Section 35-5-8w, had sand at 2,119-56 feet and made 43,000,000 feet of gas. Magnolia's No. 6, SE cor. NE NE, Section 10-5-9w, is drilling at 700 feet. The Carter Oil Co.'s No. 1, SW cor. NE SE, Section 21-3-5w, is drilling at 800 feet. Magnolia Petroleum Co. has a rig on the ground for No. 1 Todd, NW cor. SW SW, Section 21-3-5w. The Carter Oil Co. has built a rotary rig for No. 4 Cochran, NW cor. SE SW, Section 27-3-5w. The rig is on the ground for No. Abernathy, NW cor. SE SE, Section 34-3-5w.

Garfield County

Sinclair Oil & Gas Co.'s No. 53, NE cor. SE NE, Section 13-22-4w, made 160 bbls. from sand at 3,095-3,111 feet. No. 57, NE cor. SE NE, Section 13-22-4w, made 800 bbls. from sand at 3,677-3,702 feet. No. 59, NW cor. SE NE, Section 13-22-4w, made 500 bbls. from sand at 2,511-17 feet. No. 61, SE cor. SW NE, Section 13-22-4w, had sand at 3,102-12 feet and swabbed 140 bbls. oil and 150 bbls. water. No. 16, SE cor. SE NE, Section 36-22-4w, had sand at 2,155-27 feet and pumped 10 bbls. Roxana Petroleum Corp.'s No. 27, NW cor. SW SW, Section 18-22-3w, had sand at 3,591-3,617 feet and made 1,400 bbls. No. 6-T, NE cor. SW SW, Section 18-22-3w, had sand at 3,589-3,619 feet and made 1,028 bbls. No. 7-T, SE cor. NW SW, Section 18-22-3w, made 160 bbls. from sand at 3,711-16 feet. Sinclair Oil & Gas Gas Co.'s No. 42, NE cor. SW NW, Section 18-22-3w, made 300 bbls. from sand at 3,646-64 feet. No. 43, NE cor. SW NW, Section 18-22-3w, had sand at 3,662-78 feet and made 250 bbls. after a shot of 20 quarts. No. 49, NW cor. SW NW, Section 18-22-3w, made 90 bbls. after a shot of 3,662-99 feet. No. 17, NE cor. SW NE, Section 19-22-3w, is drilling at 500 feet. No. 29, NW cor. NE NW, Section 19-22-3w, had sand at 3,596-3,624 feet and made 300 bbls. oil and 10 bbls. water. Champlin Refining Co.'s No. 3-A, NW cor. NE, Section 21-22-3w, is dry and abandoned at 1,983 feet.

Carter County

Schermerhorn and others' No. 4, NE cor. NW NE, Section 8-3s-2w, had broken sands at 2,629-3,407 feet and pumped 110 bbls. the first 24 hours. In the Brock Pool, the Amerada Petroleum Corp.'s No. 26 Baptiste, SW cor. NW SE, Section 20-5s-1, is drilling at 450 feet. No. 27 Baptiste, CEL NE SE, Section 20-5s-1.

L. J. BELNAP MADE PRESIDENT

L. J. Belnap has been elected president of the Worthington Pump & Machinery Corp. following a meeting of the board of directors. C. Phillip Coleman, retiring president, was elected chairman of the board. Mr. Belnap was formerly president of Rolls Royce of America and chairman of Wills St. Claire Co. of Detroit.

PRAIRIE SHIPMENTS

Shipments of the Prairie Pipe Line Co. for July totaled 4,234,294.15 bbls., or a daily average of 136,590 bbls. This compares with shipments of 4,215,416.06 bbls. in June for a daily average of 140,514; 4,542,260 bbls. with a daily average of 146,525 in May; and 4,332,972 with a daily average of 144,432 for April.

NEW FIELDS IN GERMANY

It is reported a concession in Bavaria has been taken for petroleum drillings by the Aniline Co. Up to a depth of 500 meters it had met with gas only, and the petroleum bed is expected to be found at some depth even greater than the Pechelbronn strata, of which, it is believed, the Bavarian Field is an extension. The Riebeck-Oelhandels Co. and the newly-formed German Gasoline Co. are interested.

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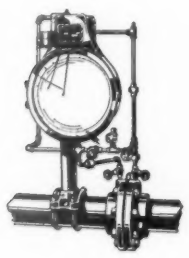

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When you remove the chart from a Metric Orifice Meter you have a record upon whose accuracy you can confidently rely.

The design of the meter is such that the cumulative error from any twisting or bending action, friction, or play in joints shall never exceed ¼ of 1% in the calculated results. The uniform area of the mercury pots, large area of float, long lever arm, small angle of movement of the pen, minimum number of moving parts and few surfaces affected by friction–these are a few of the reasons for a meter that is accurate.

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Literature fully descriptive of all types of Metric Meters will be gladly furnished

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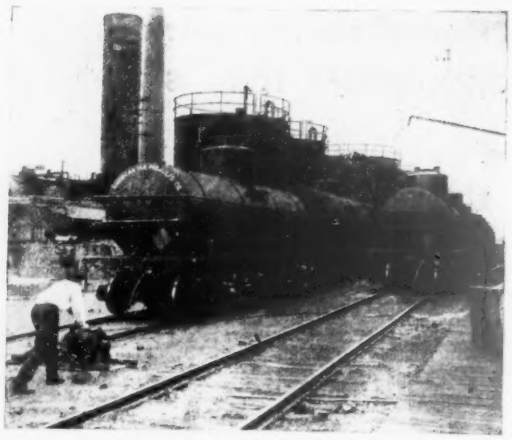

Pulling 72-ton tank cars with a 480-pound Sullivan Portable Hoist at the American Tar Products Co., Cicero, Ill. Track is level and the average length of haul is 165 feet.

QUARTER-TON HOIST PULLS 72-TON CARS

In the picture, a 72-ton tank car is being pulled away from the loading spout by a 480-pound Sullivan electric hoist. Both loaded and empty cars are handled by this outfit much quicker and much cheaper than hand labor could handle them—yet no big investment in equipment is required, and power and upkeep are low.

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FIRST LOCATIONS IN NORTH AND WEST TEXAS AND IN PANHANDLE

Hemphill County

Mitchell and others' No. 1 J. E. George, 330 feet north and west of SE cor. NE, Section 40, Block A-2, H. & G. N. Survey.

Roberts County

Charles Page and others' No. 1 F. N. Hamilton, 5,610 feet south and 4,850 feet west of NE cor. of Clay County school land. Pan-State Oil Co.'s No. 1 A. H. Sandy, 330 feet north and west of SE cor. of Section 179, Block 42, H. & T. C. Survey.

Hutchinson County

Amerada Petroleum Corp.'s No. 5 J. A. Whittenberg-B, 990 feet north and 833 feet east of SW cor. NW, Section 89, Block Z, G. C. & S. F. Survey; No. 3 G. A. Whittenberg, 1,152 feet south and 519 feet east of NW cor. Section 20, Block 47, H. & T. C. Survey. Currie Brothers and J. R. Phillips' No. 4 H. E. Smith and others, 330 feet south and west of NE cor. SE SE, Section 14, Block Y. W. H. Holmes' No. 2 H. E. Smith and others, 330 feet north and west SE cor. Section 12, Block Y. Holmes, Currie and McKnight's No. 3 H. E. Smith and others, 330 feet north and 865 feet west of NE cor. of north 60 acres, east 100 acres of SE, Section 12, Block Y. Midwest Exploration Co.'s No. 2 Smith and others-Tyrell, 330 fee south and east of NW cor. SE NE, Section 12, Block Y; No. 3, Smith and others-Tyrell, 330 feet north and east of SW cor. SW NE NE, Section 12, Block Y. McIlroy & Herring's No. 5 H. E. Smith and others, 330 feet south and east of NW cor. E half SW, Section 5, Block Y; No. 6 H. E. Smith and others, 330 feet south and west of NE cor. of E half SW, Section 5, Block Y. Phillips Petroleum Co.'s No. 1 J. A. Whittenberg-Roy, 330 feet south and east of NW cor. of north 184 acres, south 420 acres of Section 65, Block 46, H. & T. C. Survey; No. 1 J. A. Whittenberg-Whit, 328 feet south and 223 feet east of NW cor. of south 60 acres of north 220 acres, Section 65, Block 46, H. & T. C. Survey; No. 2 J. A. Whittenberg-Whit, 327 feet south and 996 feet east of NW cor. of south 60 acres, north 220 acres of Section 65, Block 46, H. & T. C. Survey; No. 3 J. A. Whittenberg-Whit, 326 feet south and 996 feet west of NE cor. south 60 acres, north 220 acres of Section 65, Block 46, H. & T. C. Survey; No. 4 Whittenberg-Whit, 325 feet south and 330 feet west of NE cor. south 60 acres, north 220 acres, Section 65, Block 46, H. & T. C. Survey. Phillips Petroleum and Pulaski Oil Co.'s No. 2 Johnson Brothers, 946 feet south and 327 feet east of NW cor. Lot 1, Johnson Brothers subdivision, Mary Whitley Survey No. 1. Prairie Oil & Gas Co. and others' No. 19 Johnson Brothers-A, 330 feet north and east of SW cor. NE NE, Section 20, Block Y; No. 20 Johnson Brothers-A, 330 fee south and west of SW cor. of Gulf Production Co.'s lease No. 8888 out of Mary Whitley Survey No. 1 located in Section 64, Block 46, H. & T. C. Survey; No. 21 Johnson Brothers-A, 330 feet north and east of SW cor. of SE SE, Section 20, Block Y; No. 22 Johnson Brothers-A, 330 feet south and 1,004 feet west of the NE cor. SE, Section 21, Block Y. Spring Creek Oil Co.'s No. 4 H. E. Smith and others, 330 feet south and west of NE cor. NW SW, Section 5, Block Y.

Moore County

Humble Oil & Refining Co.'s No. 1 C. L. Kilgore, 330 feet north and east of SW cor. NE, Section 28, Block 44, H. & T. C. Survey. Shadler Brothers' No. 1 John Lowrey, 330 feet north and west of SE cor. Section 237, Block 44, H. & T. C. Survey.

Hartley County

Crane Oil Co.'s No. 1, G. B. Coots, 330 feet south and west, NE cor. NW, Section 52, Block X-R, W. M. D. Lee Survey. Doring and others' No. 1 A. C. Ashby, 330 feet south and west of NE cor., Section 1, Block 1, J. Poitevent Survey. Kork Oil Co.'s No. 1 J. M. Shelton, center of Section 1, Block B-8, E. L. & R. R. B. S. Walker's No. 1 W. N. Stone, 330 feet south and west NE cor. Section 35, Block I-T-O, T. & N. O. Survey.

Potter County

Kelly & Harris' No. 1 J. A. Bush, 330 feet south and west NE cor., Section 161, Block 9, B. S. & F. Survey.

Carson County

Marland Oil Co.'s No. 6, S. B. Burnett-A, 450 feet north and east middle of south line N, Section 116, Block 5, I. & G. N. Survey; No. 2 S. B. Burnett-C, 1,337 feet south and 450 feet west NE cor. NE, Section 105, Block 5, . & G. N. Survey; No. 3 S. B. Burnett-C, 450 feet south and 1,337 feet west NE cor. Section 105, Block 5, I. & G. N. Survey.

Gray County

Magnolia Petroleum Co.'s No. 12 Morton Brothers, 990 feet south and 330 feet west NE cor. Section 82, Block 3, I. & G. N. Survey. Phillips Petroleum Co.'s No. 1 H. M. Davis, 330 feet north and west SE cor. SE NE, Section 86, Block 3, I. & G. N. Survey. Roxana Petroleum Corp.'s No. 1 B. E. Finley, 4,793 feet north and 330 feet east SW cor. B. E. Chaney Survey. Shamrock Petroleum Co.'s No. 4 Worley & Reynolds, 330 feet south and east NW cor. NW, Section 83, Block 3, I. & G. N. Survey. Sun Oil Co.'s No. 2 Worley & Reynolds, 330 feet south and east NW cor. SW, Section 83, Block 3, I. & G. N. Survey. Travis and others' No. 1 Mrs. J. D. Back, center Section 44, Block 25, H. & G. N. Survey. Weir, Kribs & Finklea's No. 1 B. F. Talley, 330 feet north and east SW cor. NE, Section 114, Block M-2, B. S. & F. Survey.

Wheeler County

Continental Oil Co.'s No. 1 W. C. Company, 330 feet north and east SW cor. of NW SW, Section 12, Block 27, H. & G. N. Survey.

Wichita County

Simms Oil Co.'s No. 4 B. F. Dutton, 164 feet south, 764 feet east of the most westerly NW cor. of lease out of Section 12, League 4, Denton County school land, A-417. E. J. Stump & Co. and others' No. 2 W. H. Chilson, Section 12, 300 feet south and 450 feet east NW cor. Section 12, League 4, Denton County school land, A-417.

Wilbarger County

Humble Oil & Refining Co.'s No. 6 W. T. Waggoner-I, 450 feet north and 490 feet west SE cor. of 40-acre "L" lease out of Section 47, Block 4, H. & T. C. Survey; No. 12 W. T. Waggoner-O, 150 feet south and 450 feet west NE cor. of 40-acre "O" lease out of Section 47, Block 4, H. & T. C. Survey; No. 2 W. T. Waggoner-P, 150 feet north and 450 feet west SE cor. of 40-acre "P" lease out of Section 47, Block 4, H. & T. C. Survey. Magnolia Petroleum Co.'s No. 51 W. R. Piper, 2,250 feet south and 1,650 feet east, NW cor. Section 18, Block 13, H. & T. C. Survey; No. 1 Waggoner-Maggie, 150 feet north and east SW cor. NE NE, Section 8, Block 13, H. & T. C. Survey. Milham Corp.'s No. 9 W. T. Waggoner-L, 155 feet north and east SW cor. of 34.6-acre "L" lease out of Section 42, Block 4, H. & T. C. Survey; No. 1 W. T. Waggoner-M, 150 feet south and west of NE cor., Section 58, Block 1, H. & T. C. Survey; No. 1 W. T. Waggoner-O, 150 feet south and east NW cor. of SE Section 10, Block 6, H. & T. C. Survey. Wanderer Oil Co.'s No. 1 C. S. Smith, 150 feet north and east of SW cor. S NE, Section 31, Block 15, H. & T. C. Survey.

Hardeman County

D. L. Wolf and others' No. 1 A. J. Norton, 2,800 feet north and 1,470 feet east of SW cor. of Section 14, H. E. & W. T. R. R.

Cochran County

J. C. Wicker's No. 1 C. C. Lendon, 278 feet north and 5,785 feet east of

(Continued on Page 188)

Regan Production Booster

For pumping Oil Wells afflicted with sand and gas interference the new Regan Production Booster solves the problem. --and quickly pays for itself by increasing production from 10 to 200 barrels per day. . . .

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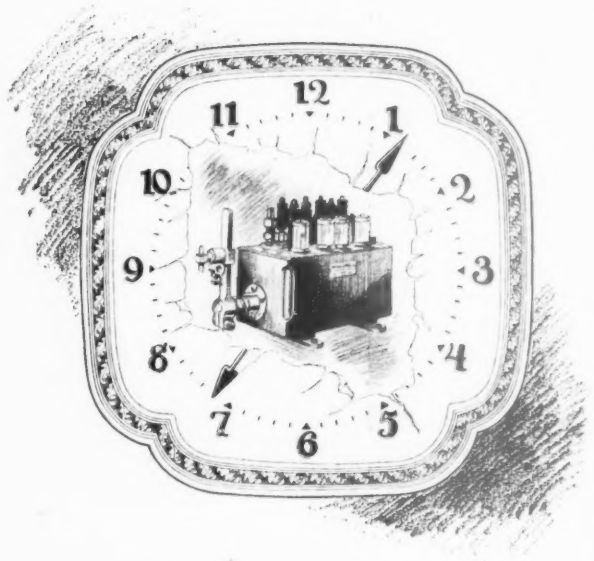

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LUBRICATOR DIVISION

MAKE VOLATILITY TEST FOR AUTOMOBILE FUELS

(Continued from Page 72)

ing upon the fractionating equipment used in production.

All the curves given in this paper are plotted on a percentage-by-volume basis in accordance with common practice. The difference in percentage by volume and percentage by weight is so small, corresponding to a difference of about 1 per cent in the total percentage evaporated, that it hardly seems worth while to complicate the presentation by departing from the usual practice in plotting distillation results.

Curve B in Figure 3 is a calculated curve for an air equilibrium-distillation, 15 to 1 mixture, of a pure hydrocarbon, octane, C_8H_{18}, having a normal boiling point of 124.6 degrees Centigrade (256.3 degrees Fahrenheit.) It should be noted that the curvature decreases progressively as the evaporation proceeds. The curves C and D of Figure 3 show the Engler distillations, plotted to a different temperature scale, of these substances. The difference in temperatures for given percentages evaporated in the two types of distillation should be noted, also that the gasoline is almost completely evaporated in the 15 to 1 mixture below the Engler initial, or first-drop, temperature.

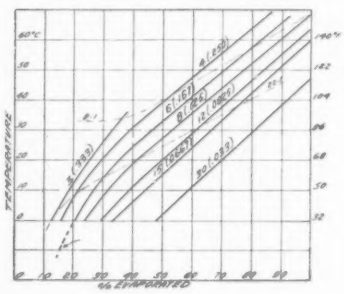

Fig. 4.—Distillation data in various air-fuel ratios for the same gasoline, No. 6, shown in Fig. 3. The whole numbers on the curves indicate the parts by weight of air to one part of fuel, and the decimal in parentheses indicate the corresponding parts of fuel to one part of air.

Distillation Data

Figure 4 shows distillation data in various air-fuel ratios for the same gasoline, No. 6, as that shown in Figure 3. The whole numbers on the curves indicate the parts by weight of air to one part of fuel, and the decimals in parentheses indicate the corresponding parts of fuel to one part of air. This 15 (0.0667) indicates the curve for a 15 to 1 air-fuel mixture or a 0.0067 to 1 fuel-air mixture supplied. The resultant air-fuel vapor mixture is dependent upon the percentage evaporated; thus, 75 per cent evaporated in a 15 to 1 air-fuel mixture supplied corresponds to a 15 to 0.75 = 20 to 1 resultant air-fuel vapor-mixture.

The lower dotted line marked 20—1 and crossing the distillation curves at an acute angle is drawn through points of 20 to 1 air-fuel vapor mixtures resulting from the partial evaporation of the fuel in the various air-fuel mixtures supplied. Points on the curves above this line represent resultant mixtures richer than 20 to 1. In like manner, the upper dotted line is drawn for a resultant 8 to 1 air-fuel vapor mixture. Assuming that these ratios mark the rich and the lean limits of explosive mixtures, it is seen that the portion of the plot between these lines represents the operating range in the engine. For instance, an 8 to 1 mixture at 70 degrees Centigrade (158 degrees Fahrenheit) would be barely lean enough to fire, and a 3 to 1 mixture at 3 degrees Centigrade (37.4 degrees Fahrenheit) would give a resultant mixture barely rich enough to fire. This is based on the assumption that the evaporation takes place with air at atmospheric pressure.

As has been pointed out previously, the quality of a substance evaporated into a given space is independent of the weight of the air or of any other inert gas which may be present in that space. It was also stated that weight of air is here used purely as a convenient measure of volume, understanding that the air is under a pressure of 1 atmosphere.

Now let us consider that evaporation takes place from a 3 to 1 air-fuel mixture supplied at an air-pressure of ½ instead of 1 atmosphere. Obviously, since the volume of a given weight of air is, at a constant temperature, inversely proportional to the pressure, the evaporation takes place into a volume of air equivalent to that which would be occupied at 1 atmosphere of pressure by the air in a 6 to 1 mixture. Making observations of percentage evaporated in a 3 to 1 air-fuel mixture at a ½-atmosphere pressure, we find that the 3 to 1 curve is displaced to the right and superimposed on the 6 to 1 atmospheric curve. This follows from the fact that evaporation takes place into exactly the same volume in both cases. This relation makes it easy to construct a distillation plot from lower pressures, having given the data for distillation in various weight ratios at atmospheric pressure. Figure 4 can be transposed into ½-atmosphere plot by dividing the air weights by 2; thus, 3 becomes 1½, 4 becomes 2, 6 becomes 3, and the like. The fuel weights, in parentheses, are doubled to correspond. With this change, a corresponding change must be made in the location of the constant-mixture lines.

Figure 5 represents a corresponding plot for a pure hydrocarbon, octane, and it is seen that the constant resultant-mixture lines are perpendicular to the temperature axis, indicating that no change in resultant-mixture richness can be secured below 100 per cent evaporated by supplying an excess of a pure compound. However, the effect of reduction of air-pressure is similar to that for a gasoline. The circles represent the 20 to 1 and the 8 to 1-mixture lines for a ½-atmosphere pressure.

From Figure 5 it is seen that a 3 to 1 air-fuel mixture supplied will give, at atmospheric pressure, a resultant 20 to 1 mixture at 14 degrees Centigrade (57.2 degrees Fahrenheit). At ½-atmosphere pressure, however, reading on the 6 to 1 line, the temperature corresponding to a 20 to 1 resultant mixture, the lower line of circles, is only 3 degrees Centigrade (37.4 degrees Fahrenheit). The effect of reduction of air-pressures on the mixture richness is obvious. This effect is solely due to the fact that the reduced air-pressure results in a correspondingly reduced weight of air per unit of volume and, for a given resultant air-fuel ratio, a proportionately smaller quantity of fuel must be vaporized. The resultant mixture, whether of a gasoline or a pure hydrocarbon, will supply only one-half the amount of energy on combustion as would a corresponding mixture-ratio at a pressure of 1 atmosphere.

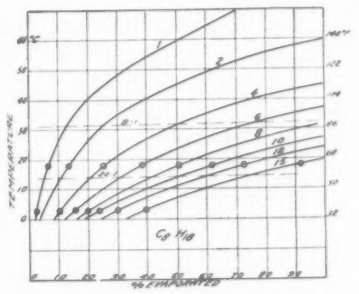

Fig. 5.—Plot for a pure hydrocarbon, octane, corresponding to that in Fig. 4. Any air-fuel mixture supplied will give, at atmospheric pressure, a resultant 20 to 1 mixture at 14.0 degrees Centigrade. (57.2 degrees Fahrenheit.) At a half atmosphere pressure, a resultant 20 to 1 mixture can be obtained at 3 degrees Centigrade, (37.4 degrees Fahrenheit.)

Engine Performance

The prediction of the performance of the actual engine from these volatility data involves the introduction of other factors, some of which may be general, applying to the majority of present-day engines, and others specific, such as a special engine or induction system. One of the general questions relates to the

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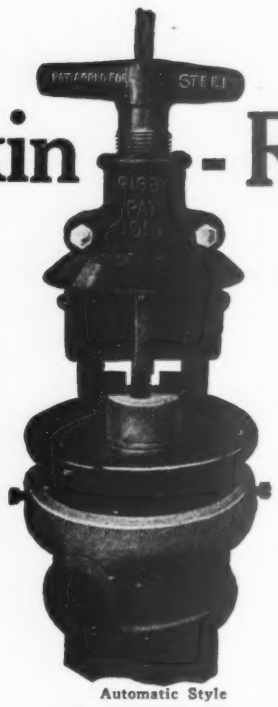

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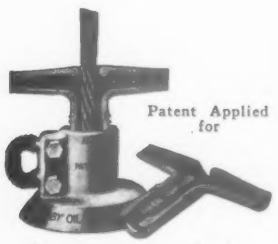

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attainment of vapor equilibrium in the engine. This is largely a matter of heat transfer to the liquid fuel and involves a time factor. Obviously, this factor of degree of equilibrium should not be included in a test method, but should be evaluated as well as may be in the application of test results. In this connection it can be said that the heat of vaporization of the fuel, that is, the quantity of heat required to vaporize unit mass of the fuel, directly affects the rate of attainment of vapor equilibrium under a given set of operating conditions. Fortunately, the heats of vaporization of petroleum products differ among themselves but slightly; so, this factor can properly be neglected here. However, other substances, alcohols for instance, have heats of vaporization very different from the petroleums and, in a relative rating of petroleum and alcohol fuels, this factor should be taken into account. It does not, however, seem either necessary or advisable to try to set up a test method which evaluates directly the combined effect of volatility and heat of vaporization.

Other general questions relate to the place and conditions of evaporation. Does

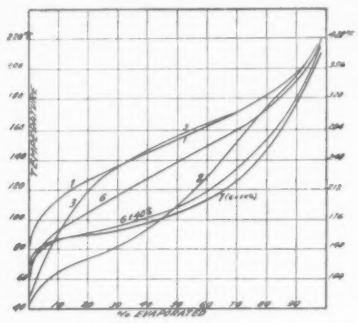


Fig. 6—Engler distillation curves. These curves are for the fuels for which equilibrium air-distillation data are given. Fuels 1, 2 and 3 are special gasolines blended for the fuel volatility tests. Fuel 6 is a commercial gasoline purchased on federal specifications. Fuel 6 + 40 per cent is a blend of fuel 6 with 40 per cent of 90-per cent benzol.

evaporation take place largely in the manifold or in the cylinders? What is the prevailing pressure and the effect of compression? Obviously, the answers to these questions do affect not only the predictions of absolute, as contrasted with relative, values regarding actual engine-performance but also the choice of the particular test conditions which best represent the actual conditions of engine utilization of the fuel.

Starting Volatility

In starting an automobile engine at low temperatures it is necessary to supply relatively large quantities of fuel in order that a sufficient quantity of the more volatile components of the fuel which will vaporize under the starting conditions will be available to form an air-fuel vapor-mixture which will explode. To be enabled to speak in concrete terms, the following data are assumed:

(1) A 20 to 1 air-fuel mixture (0.05 fuel-air) is the leanest which can be ignited in the engine.

(2) This leanest explosive mixture is independent of the total pressure on the charge within the range encountered in engine operation.

(3) Evaporation takes place in the manifold and cylinders at a pressure represented by the pressure in the manifold.

(4) A 2 to 1 air-fuel mixture (0.5 fuel-air) is the richest which it is feasible to supply, short of direct priming, for starting.

Assumptions (1) and (2) probably are essentially correct, but assumptions (3) and (4) may be open to question. It is possible to supply almost any air-fuel mixture by suitable construction, of course, but it may not be expedient to exceed a certain richness on account of choking the engine with an over-rich mixture after one or two explosions. The correctness of these assumed data affects only the numerical results predicted from the volatility-test data; any other suitable data could be assumed regarding operation without effect upon the method of interpretation.

With a 3 to 1 air-fuel mixture supplied, it is apparent that 15 per cent of the fuel must be evaporated to give a 3.00 to 0.15 = 20 to 1 resultant air-fuel vapor mixture. Referring to Figure 4, it is seen that 15 per cent of the fuel is evaporated in a 3 to 1 mixture at 1 atmosphere pressure at 2 degrees Centigrade (35.6 degrees Fahrenheit), neglecting here the difference between percentage by weight and percentage by volume. However, engines usually are started with the throttle almost closed, giving a reduction of pressure in the manifold; so, if we consider the ½-atmosphere condition, the temperature is —10 degrees Centigrade (14 degrees Fahrenheit) 15 per cent on the 6 to 1 line. This extrapolation of the 6 to 1 curve in Figure 4 is, of course, of doubtful accuracy, but it serves here only to illustrate the point regarding the effect of reduced pressure on resultant-mixture richness.

Referring to Figure 5 for the pure hydrocarbon, it is seen that from a 3 to 1 or any other mixture at 20 to 1 mixture results at 14 degrees Centigrade (57.2 degrees Fahrenheit) at 1 atmosphere total pressure. At a ½-atmosphere pressure, the temperature is 3 degrees Centigrade (37.4 degrees Fahrenheit). Thus, starting with a pure substance differs from starting with gasoline in that enrichment cannot be secured by an excess supply of fuel.

Temperatures

The temperatures at which some pure hydrocarbons will give 20 to 1 resultant air-fuel mixtures at atmospheric pressure are shown in Table 1.

TABLE 1.—TEMPERATURES AT WHICH SOME PURE HYDROCARBONS GIVE A 20 TO 1 MIXTURE

Substance—	Normal Boiling Point Deg. Cent.	Deg. Fahr.	Temp. to Give 20 to 1 Mixture Deg. Cent.	Deg. Fahr.
Ethyl Alcohol (C_2H_5OH)	78.5	173.3	9.5	49.1
Benzene (C_6H_6)	79.6	175.3	—11.0	12.2
Toluene (C_7H_8)	110.5	230.9	9.0	48.2
Hexane (C_6H_{14})	69.0	156.2	—23.0	—9.4
Heptane (C_7H_{16})	98.4	209.1	—1.0	30.2
Octane (C_8H_{18})	124.6	256.3	14.5	58.1

The data in Table 1 show why the addition of considerable quantities of benzol to gasolines, although improving the

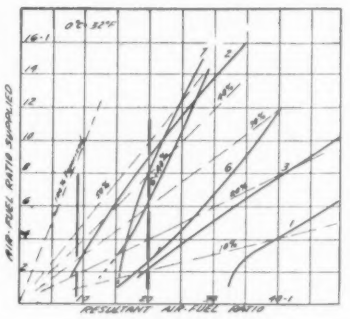
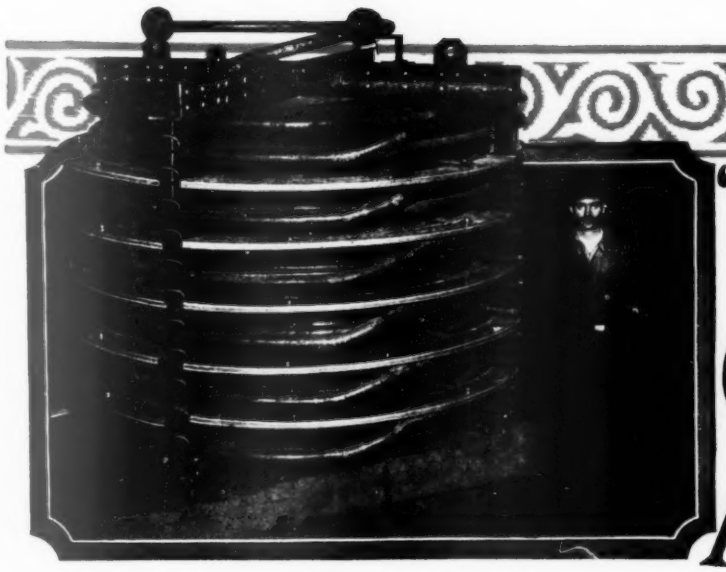


Fig. 7.—Equilibrium air-distillation characteristics of the fuels. These are for 0 degree Centigrade (32 degrees Fahrenheit) in various air-fuel ratios supplied. The ratios are plotted as ordinates against the air-fuel vapor ratios which result from the partial evaporation of the fuel as abscissas. Points to the left of the ordinate corresponding to the 20 to 1 resultant-mixture and to the right of the ordinate corresponding to the 8 to 1 resultant-mixture are presumably in the explosive range.

total volatility, often does not have a desirable effect on starting characteristics at low temperatures, since part of the more volatile compounds, hexanes and pentanes, are replaced by the less volatile benzol, benzene and toluene. The undesirable effect should be especially marked where such blends are made up to have the same average volatility as the unblended fuel.

Figure 6 shows the Engler distillation-curves for the fuels for which the equilibrium air-distillation data are given in this paper. Nos. 1, 2 and 3 are special gasoline blended for the fuel-volatility work described at the 1926 annual meeting of the society. Note that fuels 1 and 3 are similar above the 25 per cent



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point with fuel 2 decidedly lower than either up to the 85 per cent point, beyond which the three curves are practically identical. Fuel 6 is a commercial gasoline purchased on federal specifications in quantity for engine work at the Bureau of Standards. Fuel 6 + 40 per cent is a blend of fuel 6 with 40 per cent of 90 per cent benzol, and fuel 7 is a blend of fuel 6 with 50 per cent of the benzol.

Figure 7 shows the equilibrium air-distillation characteristics of these fuels at 0 degrees Centigrade (32 degrees Fahrenheit) in various air-fuel ratios supplied. These ratios are plotted as ordinates against the air-fuel-vapor ratios, which result from the partial evaporation of the fuel, as abscissas. Points to the left of the ordinate corresponding to the 20 to 1 resultant-mixture and to the right of the ordinate corresponding to the 8 to 1 resultant-mixture are presumably in the explosive range.

The dotted lines radiating from the zero of co-ordinates represent various percentages evaporated. The order of the fuels as compared with the lower end, or 10 per cent point of the Engler distillation curve should be noted. The crossing of curves for fuel 2 and fuel 6 + 40 per cent on the two plots in the region of 50 per cent evaporated, and the incipient merging of fuels 6 and 3 at 5 per cent or 10 per cent evaporated are of interest. The sharp drooping of fuel 1 below the 3 to 1 air-fuel ratio supplied is of especial interest. This fuel will not give an explosive mixture with air in a glass bomb as described at the 1926 annual meeting of the society, at 0 degrees Centigrade (32 degrees Fahrenheit), with any supplied mixture-ratio. The leanest resultant mixture which would fire in this type of bomb is about 29 to 1 or 30 to 1 air-fuel vapor. The trend of the curve for fuel 1 indicates that a 30 to 1 air-fuel-vapor mixture

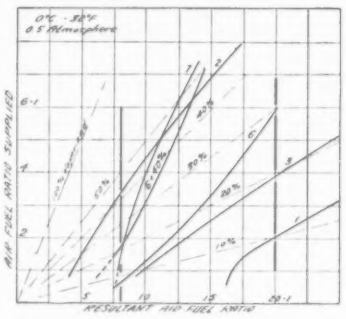

Fig. 8.—Data on the fuels at a half-atmosphere pressure. These data were obtained at 0 degree Centigrade (32 degrees Fahrenheit.) On this reduced-pressure basis, No. 1 fuel shows a 20 to 1 resultant-mixture from a 2 to 1 mixture supplied.

could not be obtained with this fuel at 0 degrees Centigrade (32 degrees Fahrenheit) atmosphereic pressure, with any air-fuel ratio supplied. Further, the engine used in the starting tests could not be started at 0 degrees Centigrade (32 degrees Fahrenheit) with this fuel. As previously mentioned, volatility data at an air-pressure of 1 atmosphere can be converted readily into data corresponding to other total pressures.

Figure 8 represents the data on these fuels at 0 degrees Centigrade (32 degrees Fahrenheit) and a ½-atmosphere pressure. This transformation is easily made here by dividing both co-ordinate scales by 2 and shifting the 20 to 1 and the 8 to 1 resultant air-fuel vapor ordinates to correspond. The relative positions of the curves are not changed. On this reduced-pressure basis No. 1 fuel shows a 20 to 1 resultant-mixture from a 2 to 1 mixture probably would barely result from a very large supply of fuel, priming at a pressure of about .65 atmosphere.

Space will not be taken here to point out the correlations between the volatility data and the engine-starting tests previously referred to except to state that fuels numbered 1, 2, 3, 6, and 7 are identical with those used in the engine tests. It is seen from these data, in Figure 7, that the relative rating of fuels depends upon the air-fuel ratio supplied, as well as upon the temperature. Possibly 0 degrees Centigrade (32 degrees Fahrenheit) is not a sufficiently low temperature to give the ultimate rating as to starting performance. Certainly

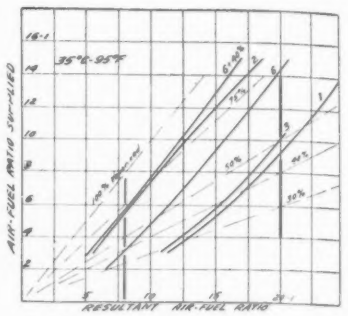

Fig. 9.—Analogous data to those in Fig. 7. The data were obtained at 35 degrees Centigrade (95 degrees Fahrenheit), and indicate that the differences in volatility are less at the higher temperatures with larger percentages evaporated.

not, except for such fuels as No. 1, if the air-fuel ratio is to be very small, as in priming. Probably, however, for operations on the choke, the 4 to 1 ratio, corresponding to 2 to 1 at a ½-atmosphere pressure, would give a very fair indication of relative starting performance.

Operating Volatility

The data so far presented indicate rather wide difference in the starting performance of these fuels. Figure 9, showing data obtained at 35 degrees Centigrade (95 degrees Fahrenheit) analogous to those shown in Figure 7 for 0 degrees Centigrade (32 degrees Fahrenheit), indicates that the difference in volatility are less at the higher temperatures with larger percentages evaporated; and Figure 10, showing data obtained for 60 degrees Centigrade (140 degrees Fahrenheit), indicates still closer approach to equality. Figure 11 shows distillation data for 15 to 1 air-fuel ratios at atmospheric pressure from these five fuels. The region above 95 per cent evaporated has not been examined minutely for all the fuels; however, it seems improbable that the departure from the straight line in this region would be sufficient to affect the saturation temperature appreciably. Table 2 presents saturation temperatures for various air-fuel ratios, together with some points on the Engler distillation curve.

Sufficient data are not yet available to justify an attempt to show correlation or lack of correlation between Engler and equilibrium air-distillation data; however, in a general way, especially as regards starting volatility, the agreement seems to be surprisingly good.

Saturation temperatures, of the temperatures of complete evaporation in the

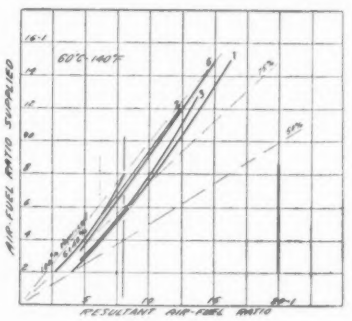

Fig. 10.—Similar data to those of Fig. 9 taken at 60 degrees Centigrade (140 degrees Fahrenheit) the data indicate still closer approach to equality.

air-fuel mixture, are probably indicative of the dilution characteristics of the fuel in that a lowering of say 5 degrees Centigrade (9 degrees Fahrenheit) in the saturation temperature should permit engine operation at a correspondingly lower temperature for the same dilution. In this connection it should be remembered,

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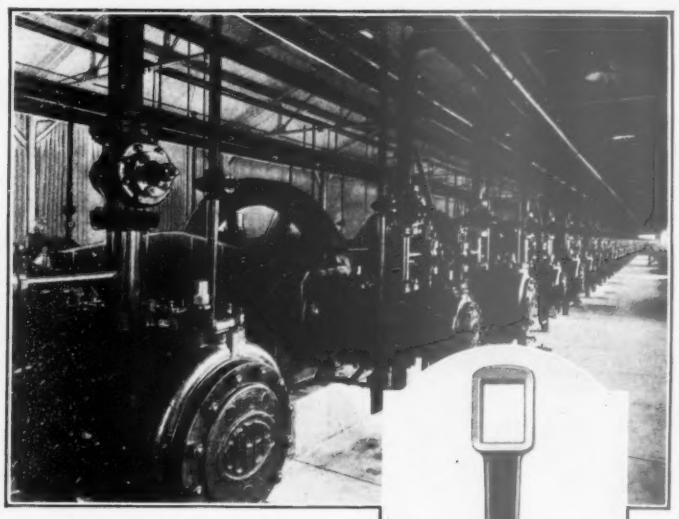

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however, that operation just above the dry-point cannot be expected to eliminate dilution totally on account of the lowering of the vapor-pressure of the fuel by

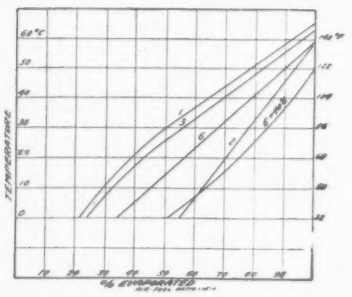


Fig. 11.—Distillation data for 15 to 1 air-fuel ratios. The data are obtained at atmospheric pressure for five fuels.

solution in the oil-film. However, as it has been shown by R. E. Wilson and E. P. Wylde that the solubility of petroleum hydrocarbons is practically the same for all the lubricants generally used, this solubility effect does not enter into the relative comparison of fuels.

Summary

The equilibrium air-distillation seems to offer a direct and relatively simple means of measuring the volatility of motor fuels under a variety of conditions. Volatility data probably will be of immediate interest in connection with studies of engine starting and performance. Possibly such data may be of value also in indicating the most advantageous use of blending stocks to produce a fuel of desired performance as regards volatility.

The operating volatilty of a fuel can be expressed in terms of the percentage vaporized, 90 to 100 per cent, in say at 15 to 1 air-fuel mixture at some temperature near the end of the air-distillation range, say at 55 degrees Centigrade (131 degrees Fahrenheit); and the starting volatility in terms of the percentage vaporized in some low air-fuel ratio, say 4 to 1, at some low temperature such as 0 degrees Centigrade (32 degrees Fahrenheit). Ratings on this basis of the fuels here discussed are shown in Table 3.

TABLE 3.—OPERATING AND STARTING VOLATILITY IN TERMS OF PERCENTAGE VAPORIZED

Fuel No.	Percentage Evaporated at 55 Deg. Cent. (131° Fah.) Air-Fuel Ratio 15 to 1	0 Deg. Cent. (32° Fah.) Air-Fuel Ratio 4 to 1
1	86.0	10.0
2	97.0	40.0
3	89.5	15.0
6	94.5	16.5
6 + 40	*100.0	23.5
7	...	24.3

*M. S. A. E.—Physicist, Bureau of Standards, City of Washington.

DRILLING PERMITS ISSUED

Pan American Petroleum & Transport Co. states that it has received drilling permits for 10 new wells from the Mexican Government and that there has been no cessation in drilling program due to any new regulations by the Mexican Government. The statement from Pan American Petroleum & Transport was made by J. J. Cotter, vice president, who added that the company is going ahead with its drilling in Mexico without any interruption. He further stated that the 10 new drilling permits were issued by the Government without the company filing an unlimited bond.

TUBULAR GOODS STILL IN GOOD DEMAND

(Continued from Page 70)

put on casing, when deliveries will shorten.

The steel trade as a whole is doing remarkably well, and particularly so for this time of year. Activity, in steel buying generally, has not merely been fully sustained in the past few weeks, but shows some increase. In all respects steel this summer has acted contrary to precedent, in buying, production and shipments. The condition is not really abnormal and it cannot be considered artificial in the slightest degree. Rather, conditions were somewhat artificial in other years, when buyers made forward purchases and accumulated stocks, whereby buying and shipments were lighter in summer, when one would expect the heaviest consumption. This year buying and shipments are in line with consumption and thus there is a more natural condition than in other years.

Prices Steady

Mill operations were at 80 per cent in June and seem to have been about the same in July, perhaps a little stronger, while August is expected to show up well if not better.

Steel prices are quite steady all along the line. In merchant pipe and oil country goods they are perfectly rigid at mills, and in the secondary market there is a stronger position than usual. Bars, shapes and plates are very firm, at 2.00 cents for bars and shapes and 1.90 cents for plates. Sheets show sales at various prices but if anything there is a stiffer market than a couple weeks ago. Rolling billets are perfectly firm at $35, with $5 extra for ordinary forging grade and a larger differential for guaranteed material.

Valley foundry pig iron is off another 25 cents, at $17.50, furnace.

OPENS PANHANDLE STORE

The Peerless Supply Co. of Tulsa, Okla., has opened a branch store at Phillips, in the Texas Panhandle, and has been appointed distributor of Williamsport Wire Rope in that region.

PETROLEUM STATISTICS FOR JUNE, 1926

By G. R. Hopkins
Petroleum Economist

The production of crude petroleum in the United States during June, 1926, as compiled from pipeline runs reported to the Bureau of Mines, Department of Commerce, amounted to 61,742,000 bbls., a daily average of 2,058,000 bbls. This represents an increase in daily average production over May, 1926, of nearly 2 per cent, but is a decrease from a year ago of 7 per cent.

Texas, exclusive of the Gulf Coast salt dome area, showed a considerable increase in production in June and was the chief factor in the rise for the country as a whole. This was due again to further developments in the Panhandle Field. Production in California showed a daily gain for the first time in 10 months. Increases were also reported in all the mountain, central and eastern states. Michigan entered the ranks of the petroleum-producing states for the first time, as published in this report.

Total stocks of crude petroleum east of California on June 30 amounted to 281,739,000 bbls., a decrease during the month of 2,300,000 bbls. This decline, which was of light oil, again took place despite an increase in refinery stocks. Stocks of both refinable and heavy crude in California decreased.

Refined Products: Runs to stills of crude petroleum during the month of June amounted to 65,030,000 bbls., of which 3,614,000 bbls. was foreign crude petroleum.

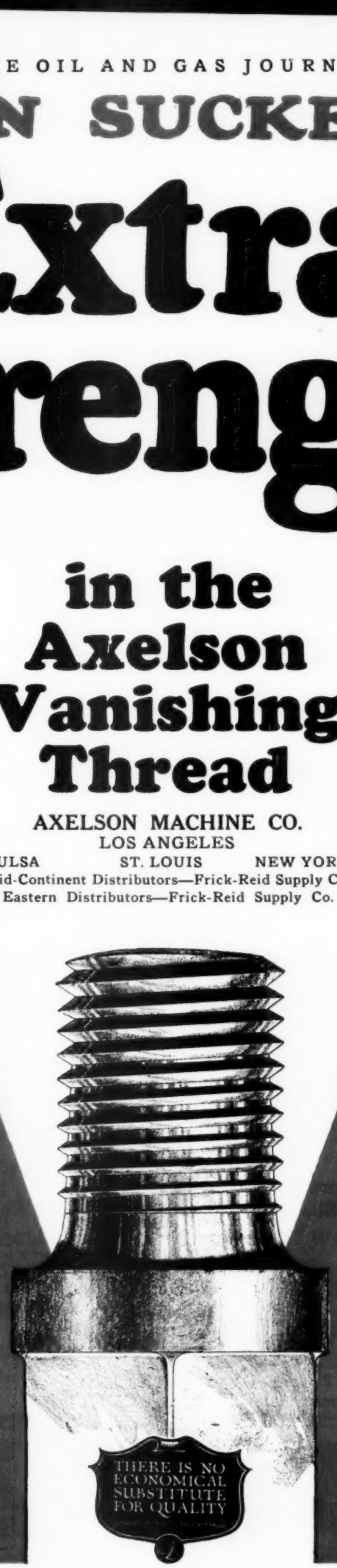
Although the total figure for June gasoline production, 1,017,986,000 gallons (24,238,000 bbls.) did not quite equal that for the preceding month, the daily average of 33,933,000 gallons (808,000 bbls.) was a record figure and an increase over May of 2 per cent. Exports dropped off but stocks were reduced 88,827,000 gallons (2,115,000 bbls.), and on June 30 amounted to 1,713,274,000 gallons (40,792,000 bbls.) Domestic demand totaled 969,051,000 gallons (23,073,000 bbls.) which repre-

AXELSON SUCKER RODS

Extra Strength

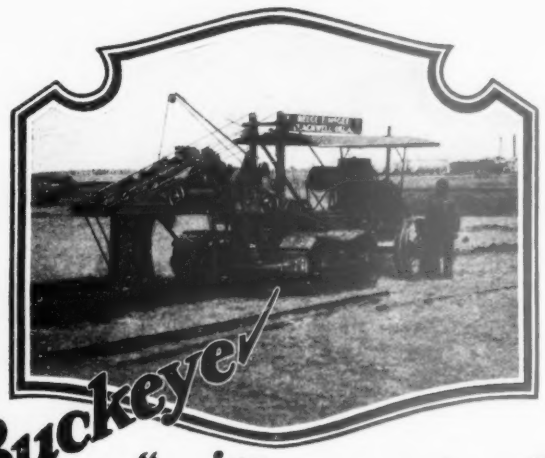
in the Axelson Vanishing Thread

AXELSON MACHINE CO.
LOS ANGELES
TULSA ST. LOUIS NEW YORK
Mid-Continent Distributors—Frick-Reid Supply Co.
Eastern Distributors—Frick-Reid Supply Co.



Deep threads at the pin end. Special analysis steel

Greatest pin area at the point of strain



Buckeye

"will meet all oil field requirements"

It requires a good machine and wonderful performance to enthuse an owner to make this statement.

Reece E. McGee, Blackwell, Okla., uses the Buckeye pipe-line excavator, pictured, in general oil field ditching. His trenches average 13 inches wide, 30 inches deep.

He says: "Repair parts are available—and most any one can run one, as they are made properly for ditching. We have cut one mile per day for seven days without a shutdown. From my experience they are the only ditcher that will meet all requirements in an oil field."

That's satisfactory performance for you. Hundreds of others have expressed the same confidence in their Buckeyes. Many of these statements are contained in the booklet *"Pipe-Line Construction Records."* Copy free for the asking.

If you have a pipe line trenching problem, don't guess at its solution—use a Buckeye and be sure.

The Buckeye Traction Ditcher Company
Findlay, Ohio

Manufacturers of Pipe-Line Trench Excavators and Pipe Screwing Machines

There's a Buckeye Sales and Service Office Near You

BUILDERS OF TRENCH EXCAVATORS FOR OVER 30 YEARS

sents a gain in daily average of 1 per cent over May. At the June rate of domestic demand, gasoline stocks on hand represented 49 days' supply as compared to 51 days' supply for the preceding month.

Production and domestic demand for gasoline during the first six months of 1926 amounted to 5,816,966,000 and 4,909,836,000 gallons respectively, which represent increases of 11 and 14 per cent respectively over the same period in 1925.

The production of kerosene was steady but demand dropped off and stocks were increased. The demand for lubricants in June was considerably above that for May and stocks of this commodity were drawn on. Stocks of both wax and fuel oil were again increased.

The refinery data of this report were compiled from schedules of 331 refineries, of a daily crude oil capacity of 2,683,000 bbls., which operated during June at 81 per cent of capacity.

Supply and Demand: Total supply during June amounted to 69,654,000 bbls., which when added to withdrawals from stocks of all oils, 3,879,000 bbls., gave 73,533,000 bbls. as the total demand. Domestic demand amounted to 62,579,000 bbls., a daily average of 2,086,000 bbls. This indicates a deficiency in domestic production as compared to domestic consumption during June of 28,000 bbls. per day. This compares with the figure for the preceding month, although the May deficiency was incurred through fire loss and not by use.

ANALYSIS OF PETROLEUM SUPPLY AND DEMAND
(Barrels of 42 U. S. Gallons)

	April, 1926	May, 1926	June, 1926	June, 1925
Supply—				
Domestic crude production:				
Light	49,116,000	51,422,000	51,065,000	
Heavy	10,872,000	11,134,000	10,667,000	66,675,000
Imports:				
Crude	5,906,000	4,502,000	5,571,000	5,153,000
Refined	1,614,000	2,016,000	2,341,000	2,070,000
Total supply all oils	67,508,000	69,074,000	69,654,000	73,898,000
Daily average	2,250,000	2,228,000	2,322,000	2,463,000
Change in stocks all oil	*10,876,000	*2,595,000	*3,879,000	5,344,000
Demand:				
Total demand	78,384,000	71,669,000	73,533,000	68,554,000
Daily average	2,612,000	2,312,000	2,451,000	2,285,000
†Exports: Crude	1,308,000	1,842,000	1,225,000	1,255,000
Refined	10,445,000	9,630,000	9,729,000	8,536,000
Domestic demand	66,631,000	60,197,000	62,579,000	58,763,000
Daily Average	2,221,000	1,942,000	2,086,000	1,959,000
Excess of daily average domestic production over domestic demand	‡213,000	76,000	‡28,000	264,000
Stocks (end of month)—				
Crude:				
East of California: Light	229,148,000	224,786,000	222,399,000	
Heavy	57,060,000	59,223,000	59,340,000	316,732,000
California: Light	38,634,000	37,179,000	35,405,000	44,058,000
§Heavy	85,656,000	88,180,000	87,389,000	68,337,000
Total crude	410,498,000	409,368,000	404,533,000	423,127,000
Total refined	120,138,000	118,673,000	119,629,000	123,668,000
Grand total liquid stocks	530,636,000	528,041,000	524,162,000	546,795,000

*Decreases. †Includes shipments to noncontiguous territories. ‡Deficiency. §Includes fuel oil.

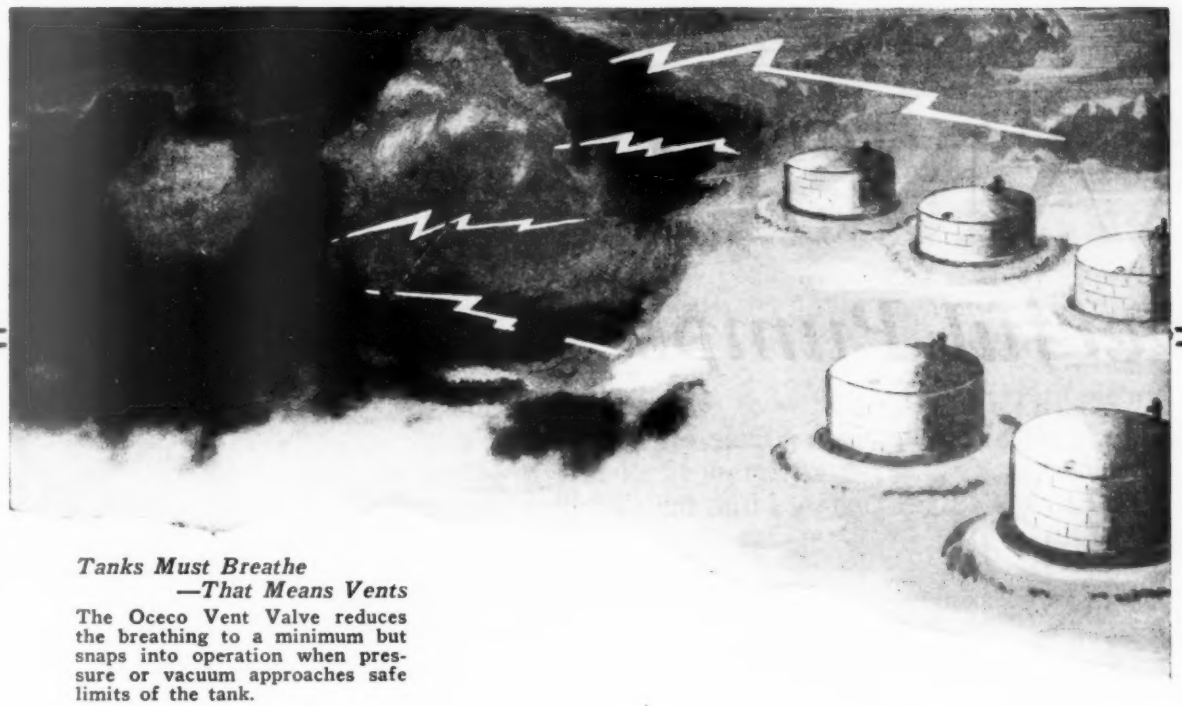
PRODUCTION OF CRUDE PETROLEUM BY FIELDS AND STATES WITH CLASSIFICATION BY GRAVITY
(Barrels of 42 U. S. Gallons)

Fields—	*May, 1926 Total	*May, 1926 D'ly. Av.	June, 1926 Total	June, 1926 D'ly. Av.	Jan.-June, 1926	Jan.-June, 1925
Appalachian	2,359,000	76,097	2,449,000	81,633	13,864,000	13,532,000
Lima-Indiana	178,000	5,742	195,000	6,500	1,038,000	1,085,000
Michigan	4,000	129	3,000	100	17,000	.....
Illinois-S. W. Ind.	707,000	22,806	718,000	23,933	4,181,000	4,231,000
Mid-Continent	34,667,000	1,118,285	34,310,000	1,143,653	195,070,000	209,338,000
Gulf Coast	2,707,000	87,323	2,536,000	83,533	15,897,000	15,123,000
Rocky Mountain	3,267,000	105,387	3,262,000	108,733	19,044,000	16,569,000
California	18,667,000	602,166	18,269,000	608,981	110,088,000	110,307,000
U. S. Total	62,556,000	2,017,935	61,742,000	2,058,066	359,199,000	370,185,000
State—						
Arkansas	5,445,000	175,645	5,061,000	168,700	31,413,000	34,097,000
California	18,667,000	602,166	18,269,000	608,981	110,088,000	110,307,000
Colorado	216,000	6,968	252,000	8,400	1,210,000	379,000
Illinois	651,000	21,000	662,000	22,067	3,858,000	3,904,000
Indiana:	68,000	2,193	70,000	2,333	391,000	426,000
Southwestern	56,000	1,806	56,000	1,866	323,000	327,000
Northeastern	12,000	387	14,000	467	68,000	99,000
Kansas	3,525,000	113,710	3,622,000	120,733	19,907,000	17,717,000
Kentucky	522,000	16,845	526,000	17,560	3,082,000	3,441,200
Louisiana	2,084,000	67,226	2,069,000	68,967	11,087,000	9,884,000
Gulf Coast	298,000	9,613	307,000	10,233	1,889,000	1,276,000
Rest of State	1,786,000	57,613	1,762,000	58,734	9,198,000	8,608,000
Michigan	4,000	129	3,000	100	17,000	.....
Montana	774,000	24,967	793,000	26,433	3,888,000	1,546,000
New Mexico	121,000	3,903	127,000	4,233	734,000	223,000
New York	154,000	4,968	160,000	5,333	927,000	782,000
Ohio:	606,000	19,548	655,000	21,833	3,628,000	3,531,000
Central and Eastern	440,000	14,193	474,000	15,800	2,658,000	2,545,000
Northwestern	166,000	5,355	181,000	6,033	970,000	986,000
Oklahoma:	14,981,000	483,253	14,483,000	482,753	84,986,000	87,809,000
Osage County	2,019,000	65,129	2,109,000	70,300	12,076,000	14,614,000
Rest of State	12,962,000	418,124	12,374,000	412,453	72,910,000	73,195,000
Pennsylvania	747,000	24,097	771,000	25,700	4,280,000	3,863,000
Tennessee	3,800	123	4,200	140	23,000	5,800
Texas:	11,339,000	365,774	11,611,000	387,033	63,574,000	74,954,000
Gulf Coast	2,409,000	77,710	2,229,000	74,300	14,008,000	13,847,000
Rest of State	8,930,000	288,064	9,382,000	312,733	49,566,000	61,107,000
West Virginia	492,000	15,871	513,000	17,100	2,894,000	2,895,000
Wyoming:	2,156,000	69,549	2,090,000	69,667	13,212,000	14,421,000
Salt Creek	1,535,000	49,516	1,439,000	47,967	9,545,000	10,478,000
Rest of State	621,000	20,033	651,000	21,700	3,667,000	3,943,000
Classification by gravity (approx.)						
Light crude	51,422,000	1,658,774	51,065,000	1,702,166	294,974,000	271,546,000
Heavy crude	11,134,000	359,161	10,677,000	355,900	64,225,000	98,639,000

*Revised.

STOCKS OF CRUDE PETROLEUM HELD IN THE UNITED STATES
(Barrels)

		May 31, 1926	June 30, 1926	June 30, 1925
At Refineries (and in coastwise transit thereto.)				
Reported by location of storage:				
East Coast: Domestic		7,134,000	8,544,000	8,784,000
Foreign		2,704,000	2,681,000	2,100,000
Appalachian		1,653,000	1,688,000	1,253,000
Indiana, Illinois, etc.		1,749,000	1,919,000	1,558,000
Oklahoma, Kansas, etc.		3,825,000	3,713,000	5,422,000
Texas: Inland		1,227,000	1,147,000	1,120,000
Gulf Coast: Domestic		6,501,000	6,736,000	5,529,000
Foreign		244,000	407,000	651,000
Arkansas and Inland Louisiana		762,000	649,000	678,000
Louisiana, Gulf Coast: Domestic		6,291,000	6,256,000	3,983,000
Foreign		1,807,000	1,464,000	1,423,000
Rocky Mountain		1,562,000	1,538,000	1,381,000
Total east of California		35,459,000	36,742,000	33,882,000
Elsewhere than at refineries—				
Domestic—Reported by field of origin:				
Appalachian: N. Y., Pa., W. Va., Eastern and Central Ohio	Gross	7,129,000	7,222,000	7,282,000
	Net	6,824,000	6,928,000	7,031,000
Kentucky	Gross	1,890,000	1,845,000	2,063,000
	Net	1,779,000	1,740,000	1,954,000
Lima-Indiana	Gross	1,053,000	1,015,000	1,353,000
	Net	851,000	813,000	1,150,000



Tanks Must Breathe
—That Means Vents

The Oceco Vent Valve reduces the breathing to a minimum but snaps into operation when pressure or vacuum approaches safe limits of the tank.

"Lightning Doesn't Worry Us Any More"

Says the Manager of a Large Eastern Refinery where Millions of Barrels of Oil are in Storage

"SEE those tanks over there," he said, with a fling of his arm, "lightning has danced and flashed all about them—fire has been all around them—grass is burnt right up to the tanks!"

"Worry? No more! Those tanks are Oceco equipped. We're not afraid of lightning or fire!"

The tanks referred to are equipped with Oceco Flame Arrestors. Even though vapors above and around are ignited, no fire can get through. Fire has *never* gone through an Oceco Flame Arrestor.

Let us figure on your requirements for sure *protection against fire—and worry.*

THE OIL CONSERVATION ENGINEERING COMPANY
877 Addison Road *Headquarters for Tank Equipment* Cleveland, Ohio

ENGINEERING AND SALES SERVICE AT:—

25 Broadway	New York	W. K. Henderson Co.	Shreveport, La.
325 Iowa Building	Tulsa, Okla.	Neilan, Schumacher & Co.	Los Angeles, Cal.
O-S Building	Casper, Wyo.	Arthur Dooley, Box 552	Beaumont, Texas

OIL TANK OCECO EQUIPMENT
SAVES EVAPORATION AND PREVENTS FIRE

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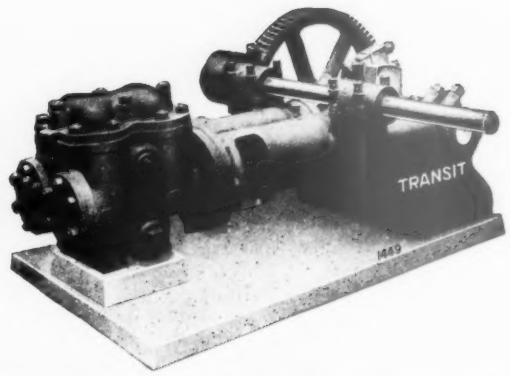
TRANSIT

Powerful Pumps



3x10" Klein Type Duplex Piston Power Pump. Will pump 75 bbls. per hour against 800 lbs. pressure.

The Klein Type fluid end always has been one of the stand-bys of the oil fields.

Since the call for power pumps has become so insistent, we have coupled an up-to-date power end to an old reliable Klein Type fluid end, with remarkable results.

The outfit complete weighs little over a ton. It makes an ideal field pump, or an oil salvaging pump to mount on a truck. With a working pressure of 800 lbs. it is often used to pump oil direct into main lines.

Many other uses will, no doubt, present themselves to men interested in a small economical power pump of relatively high working pressure.

Prices and description on request.

NATIONAL TRANSIT
PUMP & MACHINE CO.
OIL CITY, PA.

DISTRICT OFFICES

New York Philadelphia Pittsburgh
Cleveland Houston Tulsa Denver

		May 31, 1926	June 30, 1926	June 30, 1925
Illinois-S. W. Indiana	Gross	12,518,000	12,334,000	11,479,000
	Net	12,039,000	11,854,000	10,986,000
Mid-Continent: Oklahoma, Kansas, Central North and West Texas	Gross	150,725,000	148,879,000	177,723,000
	Net	138,114,000	136,046,000	166,204,000
Northern Louisiana and Arkansas	Gross	43,945,000	42,501,000	41,357,000
	Net	41,725,000	40,238,000	39,436,000
Gulf Coast	Gross	16,710,000	16,959,000	20,862,000
	Net	16,333,000	16,558,000	20,443,000
Rocky Mountain	Gross	30,567,000	30,556,000	28,786,000
	Net	30,511,000	30,509,000	28,756,000
Total pipeline and tank farm stocks east of California	Gross	264,527,000	261,310,000	290,907,000
	Net	248,176,000	244,686,000	275,960,000
Foreign crude petroleum on Atlantic Coast		42,000	58,000	79,000
Foreign crude petroleum on Gulf Coast		332,000	253,000	811,000
Total refinery, pipeline and tank farm stocks of domestic and foreign crude petroleum east of California		284,009,000	281,739,000	310,732,000
Classification by gravity (approx.)—				
East of California: Light crude (24° and above)		224,786,000	222,399,000	.....
Heavy crude (below 24°)		59,223,000	59,340,000	.....
California: Light		37,179,000	35,405,000	44,058,000
Heavy (including fuel)		88,180,000	87,389,000	68,337,000

IMPORTS AND EXPORTS OF CRUDE PETROLEUM (Barrels)
(From Bureau of Foreign and Domestic Commerce)

	*May, 1926 Total	*May, 1926 D'ly. Av.	June, 1926 Total	June, 1926 D'ly. Av.	Jan.-June, 1926	Jan.-June, 1925
Imports:	4,502,000	145,226	5,571,000	185,000	31,626,000	36,032,000
From Mexico	3,344,000	107,871	4,215,000	140,500	23,706,000	33,074,000
From Venezuela	853,000	27,516	1,008,000	33,600	5,585,000	1,713,000
From other counties	305,000	9,839	348,000	11,600	2,335,000	1,245,000
Exports:	1,842,000	59,419	1,225,000	40,833	7,573,000	6,757,000
Domestic crude oil						
To Canada	1,384,000	44,645	1,067,000	35,567	6,082,000	4,043,000
To other countries	458,000	14,774	158,000	5,266	1,490,000	2,616,000
Foreign crude oil	.....	.....	.....	.....	1,000	98,000

Note—Shipments to Alaska during June less than 500 bbls. *Revised.

INDICATED DELIVERIES OF CRUDE PETROLEUM, EXCLUSIVE OF CALIFORNIA GRADES, TO DOMESTIC CONSUMERS (Barrels)

(Production plus imports minus exports plus stocks, exclusive of consumers' stocks, at beginning of month minus stock at end of month.)

	*May, 1926 Total	*May, 1926 D'ly. Av.	June, 1926 Total	June, 1926 D'ly. Av.	Jan.-June, 1926	Jan.-June, 1925
Domestic petroleum by field of origin:						
Appalachian	2,427,000	78,290	2,384,000	79,467	13,688,000	13,833,000
Lima-Indiana	216,000	6,968	233,000	7,766	1,196,000	1,156,000
Michigan	4,000	129	3,000	100	17,000	.....
Illinois-S. W. Indiana	439,000	14,161	903,000	30,100	2,909,000	4,115,000
Mid-Continent	38,769,000	1,250,613	37,865,000	1,262,167	215,222,000	214,256,000
Gulf Coast	2,640,000	85,161	2,311,000	77,033	18,602,000	14,880,000
Rocky Mountain	2,878,000	92,839	3,264,000	108,800	17,515,000	16,485,000
Deliveries and exports	47,373,000	1,528,161	46,963,000	1,565,433	269,149,000	264,725,000
Deliveries	46,335,000	1,494,677	46,152,000	1,538,400	264,162,000	259,370,000
Foreign petroleum	4,496,000	145,032	5,634,000	187,800	31,721,000	35,778,000
Deliveries of domestic and foreign petroleum	50,831,000	1,639,709	51,786,000	1,726,200	295,883,000	295,148,000

*Revised.

***NUMBER OF PRODUCING OIL WELLS COMPLETED**

†May, 1926	June, 1926	Jan.-June, 1926	Jan.-June, 1925
1,517	1,652	8,184	7,906

*For states east of California, from Oil and Gas Journal; for California, from the American Petroleum Institute. †Revised.

SHIPMENTS OF CALIFORNIA OIL THROUGH PANAMA CANAL TO EASTERN PORTS IN UNITED STATES
(From Panama Canal Record)

	May, 1926	June, 1926	Jan.-June 1926	Jan.-June 1925
Crude oil: Long tons (2,240 pounds)	164,000	195,000	1,055,000	1,223,000
Barrels (approx.)	1,179,000	1,407,000	7,590,000	8,805,000
Refined products: Barrels (approx.)	1,811,000	1,657,000	9,122,000	5,878,000
Fuel oil	283,000	542,000	2,163,000	64,000
Gas oil	696,000	355,000	2,401,000	361,000
Gasoline	832,000	692,000	3,956,000	4,466,000
Lubricants	.....	68,000	274,000	200,000
Tops	.....	.....	328,000	787,000

COMPARATIVE ANALYSES OF MAJOR REFINED PRODUCTS, JUNE, 1926, AND PRECEDING MONTHS

	Production	Imported*	Exported*	Stocks End of Period	Domestic Demand
Gasoline (gals.):					
April	987,633,000	19,057,000	184,891,000	1,926,725,000	831,410,000
May	1,029,375,000	26,082,000	190,224,000	1,802,101,000	989,857,000
June	1,017,986,000	19,476,000	157,238,000	1,713,274,000	969,051,000
Jan.-June	5,816,966,000	119,567,000	946,184,000	1,713,274,000	4,909,836,000
Motor fuel (gals.):					
April	1,027,300,000	.....	.....	.....	.....
May	1,076,000,000	.....	.....	.....	.....
June	1,065,700,000	.....	.....	.....	.....
Jan.-June	6,068,500,000	.....	.....	.....	.....
Kerosene (gals.):					
April	210,488,000	22,000	68,973,000	294,603,000	140,841,000
May	218,115,000	154,000	68,156,000	309,861,000	134,855,000
June	209,796,000	125,000	67,373,000	330,818,000	121,591,000
Jan.-June	1,281,530,000	400,000	424,280,000	330,818,000	825,897,000
Lubricants (gals.):					
April	112,131,000	131,000	38,355,000	309,476,000	85,314,000
May	119,948,000	447,000	30,025,000	321,544,000	78,302,000
June	112,663,000	119,000	41,327,000	307,210,000	85,789,000
Jan.-June	668,072,000	1,008,000	204,455,000	307,210,000	462,044,000
Wax (lbs.):					
April	54,985,000	647,000	31,560,000	136,084,000	18,329,000
May	56,050,000	213,000	23,968,000	149,396,000	18,983,000
June	50,672,000	812,000	27,211,000	155,254,000	18,415,000
Jan.-June	314,121,000	3,427,000	165,514,000	155,254,000	113,171,000
Gas and fuel oils (gals.):					
April	1,210,724,000	48,197,000	145,963,000	†830,481,000	.....
May	1,273,467,000	57,473,000	114,938,000	†875,333,000	.....
June	1,227,933,000	77,968,000	141,528,000	†947,268,000	.....
Jan.-June	7,325,314,000	326,239,000	786,601,000	†947,268,000	.....
June, 1925, for comparison:					
Gasoline (gals.)	944,494,000	16,128,000	113,659,000	1,676,500,000	870,382,000
Kerosene (gals.)	193,210,000	107,000	69,676,000	471,037,000	103,992,000
Lubricants (gals.)	105,001,000	249,000	31,334,000	278,601,000	87,438,000
Wax (lbs.)	43,348,000	1,412,000	22,677,000	110,384,000	21,521,000
Gas and fuel oils (gals.)	1,365,792,000	69,221,000	143,594,000	††1,082,056,000	.....

*From Bureau of Foreign & Domestic Commerce. Exports, except for wax, include shipments to Alaska, Hawaii and Porto Rico.
†These stocks for east of California only.

RUNS TO STILLS AND OUTPUT OF REFINERIES IN UNITED STATES, JUNE, 1926

	Crude Oils—Domestic	Crude Oils—Foreign	Unfinished Oils	Nat.-Gas Gasoline	Total Oils Run to Stills
Appalachian	2,391,000	.....	147,000	25,000	2,563,000
East Coast	8,302,000	2,113,000	912,000	157,000	11,484,000
Ind., Ill., etc.	5,956,000	.....	311,000	77,000	6,344,000
Okla., Kans., etc.	8,292,000	.....	270,000	236,000	8,798,000
Texas	12,711,000	266,000	107,000	322,000	13,406,000
Louisiana and Ark.	4,718,000	1,235,000	214,000	56,000	6,223,000
Rocky Mountain	2,490,000	.....	634,000	87,000	3,211,000
California	16,556,000	.....	*327,000	338,000	17,221,000
Total U. S.	61,416,000	3,614,000	2,922,000	1,298,000	69,250,000
Daily average 6/26	2,047,200	120,400	97,400	43,300	2,308,300
Daily average 5/26	1,992,000	116,300	127,000	45,400	2,280,700

A 3600 Pound KEROTEST to Cap a South American Gusher

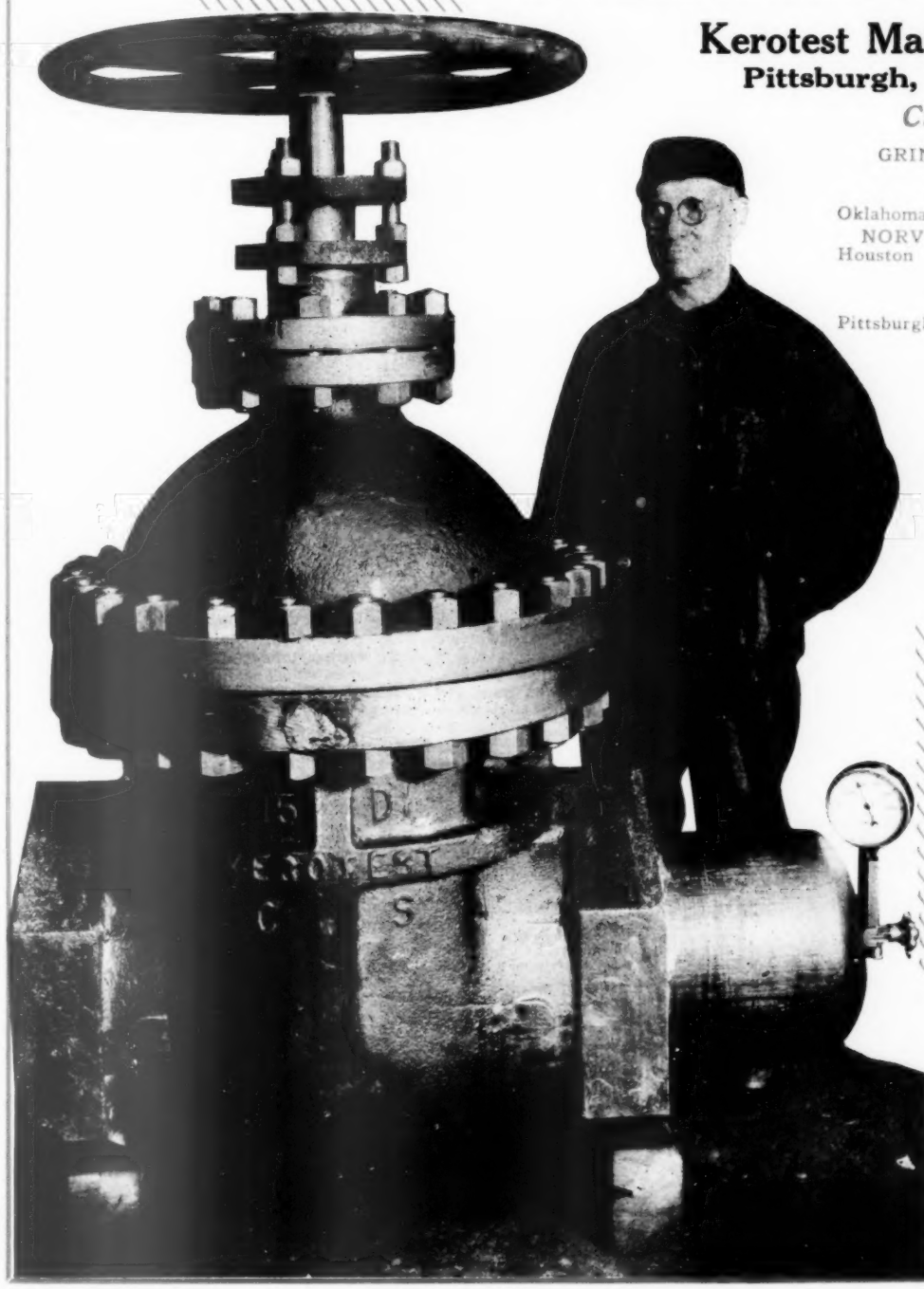
KEROTEST

KER

Big wells are constantly being brought in down in Venezuela these days and unusually large KEROTEST valves like the one illustrated are absolutely necessary.

The rigid 24-hour Kerosene test* to which all KEROTEST valves are subjected; the tough ilmenite electric steel used in its construction, its massive strength plus light weight all combine to establish KEROTEST valves as the safest and most dependable valves made for oil field service.

Get an inside slant on KEROTEST valves and fittings—send for the KEROTEST catalog.



OTEST

Kerotest Manufacturing Company
Pittsburgh, Penna.

Carried in stock and sold by

GRINNELL COMPANY OF THE PACIFIC
Los Angeles San Francisco
OIL WELL SUPPLY COMPANY
Oklahoma Kansas Colorado Wyoming
NORVELL-WILDER HARDWARE COMPANY
Houston Beaumont Shreveport Fort Worth

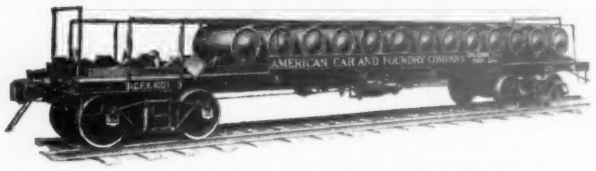
Export Distributors

OIL WELL SUPPLY COMPANY
Pittsburgh New York Tampico London

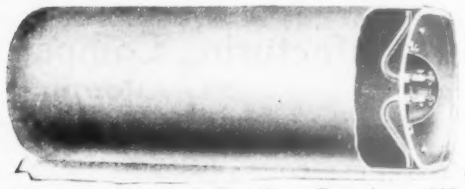
*All KEROTEST Products are Kerosene tested. The peculiar penetrating qualities of Kerosene will search out the tiniest flaw in any steel casting and show a stain on the surface of a defective casting which is impossible to conceal. Every KEROTEST valve must pass this rigid Kerosene test at maximum test pressure before being shipped.

Multi-Unit Cars

for shipping liquid chlorine, sulphur dioxide, anhydrous ammonia, methyl chloride, ethyl chloride, propane, liquefied hydro-carbons, etc.



These cars are built to carry 15 of the well-known Rowland One-Ton Containers made by the American Welding Company. Built to A. R. A. and I. C. C. requirements.
Purchasers of One-Ton Containers can eliminate freight charges from the factory (Carbondale, Pa.) by having them delivered with the new Multi-Unit Cars (made at Berwick, Pa.) with which they are to be used.
Complete information about this modern method of handling chemicals will be sent on request.

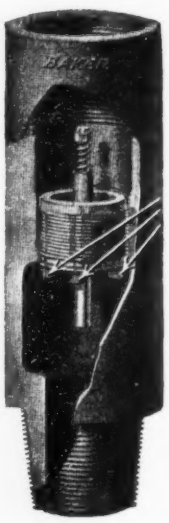


Rowland Standard One-Ton Container, 200 gallons capacity. Can be furnished in other sizes.

American Car and Foundry Company

Chicago 30 Church St., New York St. Louis

BAKER CASING SHOE CO.



The Baker Drill Pipe Float

Greater Fluid Flow and Valve Endurance

In the improved Baker Drill Pipe Float, an ingenious device permits the fluid to pass the valve with less resistance, greatly increasing the endurance and life of the valve. The valve is kept from flopping around, a fertile source of damage and wear, and the control of the distance it opens is perfect. Another feature is a safety safeguard against wet jobs. The valve stem extends through the bottom of the valve, and is threaded to a piece of ⅞" round steel. This elongation prevents the valve from turning over should it break, and the four lugs, as shown in the cut, keep it from seating.

The unique valve in the Baker Drill Pipe Float is a positive safeguard against a plugged string or a wet job. Send for the new special folder.

Mid-Continent Representatives: B & A Specialty Company, 404 W. First St., Tulsa, Okla.*

BAKER CASING SHOE COMPANY

Export Representatives: Buck & Stoddard, 25 Broadway, New York City

Box L
Huntington Park, California* Coalinga, California*
George J. Hausen, Inc., Representative, Taft, California*
**Complete stocks carried*

Output and losses:	Crude Oils—Domestic (Gals.)	Crude Oils—Foreign Kerosene (Gals.)	Unfinished Oils Gas and Fuel Oils (Gals.)	Nat.-Gas Gasoline Lubricants (Gals.)	Oils Run to Stills Wax (Lbs.)
Texas Gulf Coast	9,709,000	265,000	56,000	264,000	10,295,000
La. Gulf Coast	3,292,000	1,235,000	96,000	3,000	4,626,000
East Coast	155,521,000	38,277,000	180,204,000	33,987,000	19,371,000
Appalachian	29,701,000	15,096,000	24,530,000	18,324,000	8,387,000
Ind., Ill., etc.	137,987,000	16,887,000	72,196,000	10,858,000	6,444,000
Okla., Kans., etc.	176,771,000	29,938,000	124,994,000	8,421,000	3,653,000
Texas	218,750,000	51,983,000	208,576,000	25,352,000	4,305,000
Louisiana and Ark.	64,560,000	22,765,000	109,573,000	4,170,000	5,077,000
Rocky Mountain	57,883,000	10,532,000	29,228,000	2,185,000	3,307,000
California	166,813,000	24,318,000	478,632,000	9,366,000	128,000
Total U. S.	1,017,986,000	209,796,000	1,227,933,000	112,663,000	50,672,000
Daily average 6/26	33,933,000	6,993,000	40,931,000	3,755,000	1,689,000
Daily average 5/26	33,206,000	7,036,000	41,080,000	3,869,000	1,808,000
Texas Gulf Coast	170,343,000	42,787,000	154,369,000	24,242,000	4,013,000
La. Gulf Coast	51,566,000	20,466,000	65,439,000	4,066,000	5,077,000

Output and losses (cont.):	Coke (Tons)	Asphalt (Tons)	Other Fin. Prod. (Gals.)	Unfinished Prod. (Gals.)	Losses (Bbls.)
East Coast	14,418	151,329	8,073,000	8,132,000	411,000
Appalachian	1,872	.....	760,000	1,470,000	143,000
Ind., Ill., etc.	22,123	16,551	6,521,000	1,245,000	252,000
Okla., Kans., etc.	10,294	689	2,752,000	5,716,000	415,000
Texas	13,584	23,820	142,000	25,113,000	581,000
Louisiana and Ark.	10,921	59,222	7,048,000	31,918,000	112,000
Rocky Mountain	8,114	4,026	1,646,000	26,508,000	77,000
California	.....	45,333	6,006,000	*14,112,000	317,000
Total U. S.	81,326	300,970	32,948,000	114,214,000	2,308,000
Daily average 6/26	2,711	10,032	1,098,000	3,807,000	77,000
Daily average 5/26	2,580	8,013	1,056,000	3,734,000	73,000
Texas Gulf Coast	10,284	23,820	34,000	12,105,000	489,000
La. Gulf Coast	10,180	57,775	6,728,000	27,373,000	62,000

*Includes 36,000 bbls. net tops produced.

GASOLINE PRODUCTION BY THE VARIOUS METHODS—JUNE, 1926

(Gallons)

	Straight Run	Pct.	Cracked	Pct.	Natural-Gas Gasoline	Pct.	Total
East Coast	85,798,000	55	63,129,000	41	6,594,000	4	155,521,000
Appalachian	28,537,000	72	10,114,000	25	1,050,000	3	39,701,000
Indiana, Ill., etc.	81,417,000	59	53,336,000	39	3,234,000	2	137,987,000
Oklahoma, Kans., etc.	117,904,000	67	48,955,000	28	9,912,000	5	176,771,000
Texas	121,964,000	56	83,262,000	38	13,524,000	6	218,750,000
Louisiana and Ark.	39,349,000	61	22,859,000	35	2,352,000	4	64,560,000
Rocky Mountain	27,154,000	47	27,075,000	47	3,654,000	6	57,883,000
California	151,914,000	91	703,000	..	14,196,000	9	166,813,000
Total U. S.	654,037,000	64	309,433,000	31	54,516,000	5	1,017,986,000
Total U. S. 5/26	661,501,000	64	308,696,000	30	59,178,000	6	1,029,375,000
Gulf Coasts*	118,555,000	53	92,140,000	42	11,214,000	5	221,909,000

*Included above under Texas, Louisiana and Arkansas.

STOCKS HELD BY THE REFINING COMPANIES IN UNITED STATES JUNE 30, 1926

	Gasoline (Gals.)	Kerosene (Gals.)	Gas and Fuel Oils (Gals.)	Lubricants (Gals.)
East Coast	353,709,000	68,881,000	231,275,000	107,230,000
Appalachian	38,470,000	8,194,000	24,524,000	37,042,000
Indiana, Ill., etc.	222,601,000	27,378,000	51,784,000	31,294,000
Oklahoma, Kans., etc.	145,208,000	23,645,000	175,350,000	17,903,000
Texas	188,943,000	71,815,000	296,688,000	65,625,000
Louisiana and Arkansas	141,815,000	45,743,000	110,019,000	4,615,000
Rocky Mountain	195,397,000	11,830,000	57,628,000	7,533,000
California	427,140,000	73,332,000	.....	35,868,000
Total U. S.	1,713,274,000	330,818,000	947,268,000	307,210,000
Total U. S. 5/31/26	1,802,101,000	309,861,000	875,333,000	321,544,000
Texas Gulf Coast	166,429,000	63,599,000	259,072,000	64,063,000
Louisiana Gulf Coast	138,603,000	44,556,000	78,998,000	4,663,000

	Wax (Lbs.)	Coke (Tons)	Asphalt (Tons)	Other Fin. Prod. (Gals.)	Unfinished Oils (Bbls.)
East Coast	72,250,000	15,170	97,802	7,549,000	7,992,000
Appalachian	17,241,000	469	39	2,203,000	984,000
Indiana, Ill., etc.	28,688,000	17,227	16,271	15,849,000	3,231,000
Okla., Kans., etc.	5,291,000	24,692	1,544	2,563,000	2,353,000
Texas	10,391,000	65,287	9,337	232,000	8,041,000
Louisiana and Arkansas	14,433,000	60,248	28,251	2,155,000	3,126,000
Rocky Mountain	6,816,000	63,614	9,540	923,000	1,734,000
California	144,000	.....	38,097	10,962,000	*12,620,000
Total U. S.	155,254,000	246,707	200,881	42,436,000	40,081,000
Total U. S. 5/31/26	149,396,000	234,025	229,819	50,838,000	38,681,000
Texas Gulf Coast	10,316,000	61,915	9,337	146,000	7,601,000
Louisiana Gulf Coast	14,433,000	57,704	27,905	1,946,000	2,865,000

*Includes 4,767,000 bbls. tops in storage.

Natural-Gas Gasoline June, 1926

The production of natural-gas gasoline in the United States during June, 1926, amounted to 107,031,000 gallons, which represents a daily average of 3,568,000 gallons. This represents an increase in daily average production over the preceding month of only 10,000 gallons per day. The eastern states again reported declines in production, but California registered a sizeable increase over May production. Stocks of raw natural-gas gasoline at the plants continued to rise and amounted to 27,307,000 gallons on June 30, 1926. This is an increase of 2,600,000 over stocks in May and was undoubtedly caused by a further decline in blending at refineries. In general, the statistical history of the natural-gas gasoline industry for June, 1926, was closely comparable with that for the preceding month.

	Natural-Gas Gasoline—Production (Net)*	Natural-Gas Gasoline—Stocks End of Month	Blended Motor Fuel—Nat.-Gas Gasoline Used in Blends	Blended Motor Fuel—Naphtha or Other Oils Used in Blends	Blended Motor Fuel—Stocks End of Month
Appalachian	5,758,000	2,473,000	274,000	344,000	336,000
Indiana, Illinois, etc.	1,097,000	226,000	78,000	25,000	26,000
Oklahoma, Kansas, etc.	41,091,000	16,503,000	2,892,000	8,174,000	2,062,000
Texas	17,728,000	5,383,000	254,000	903,000	543,000
Louisiana and Arkansas	6,257,000	1,218,000	51,000	501,000	202,000
Rocky Mountain	3,779,000	417,000	102,000	162,000	164,000
Total east of California	75,710,000	26,220,000	3,651,000	10,109,000	3,333,000
California	31,321,000	1,087,000	Not available		19,000
Total United States	107,031,000	27,307,000	.....	.....	3,352,000
Daily average	3,568,000	.....	.....	.....	.....

*1 per cent estimated.

The indicated output of motor fuel in the United States from the above and other sources may be expressed by the following table:

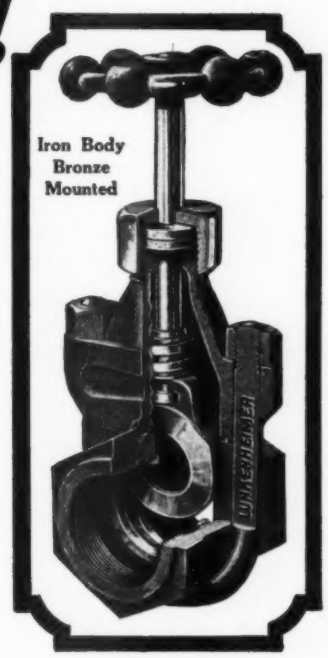
(Gallons)	May	June
Total gasoline produced at refineries	1,029,400,000	1,018,000,000
(a) Includes natural-gas gasoline blended at refineries: May	59,200,000	
June	54,500,000	
(b) Includes natural-gas gasoline run through refinery pipelines: May	11,900,000	
June	12,000,000	
Gasoline production exclusive of (a) and (b)	958,300,000	951,500,000
Natural-gas gasoline produced at plants	110,300,000	107,000,000
Benzol production*	7,400,000	7,200,000
Total motor fuel produced	1,076,000,000	1,065,700,000
Daily average	34,710,000	35,520,000

*Estimated with production of by-product coke as a basis.

Stamina Counts! in the Oil Industry!

STRENGTH, RIGIDITY, POWER OF ENDURANCE—THESE ARE THE FACTORS WHICH DETERMINE THE ULTIMATE COST OF YOUR VALVES.

The increasing necessity for lower operating costs in the oil industry is constantly influencing the installation of only such equipment as will render continuous satisfactory service with the least amount of attention and minimum maintenance expense.



LUNKENHEIMER "CLIP" GATE VALVES

have earned their place among the preferred equipment by paying their way in economical and trouble-free service.

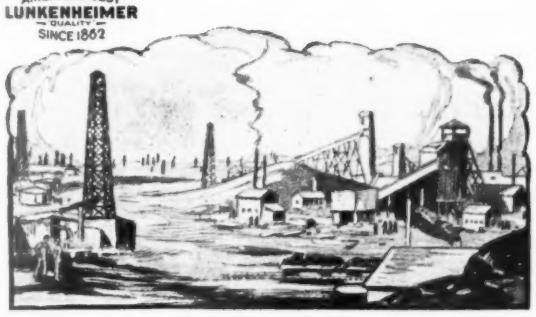
They are sturdily constructed of the very best materials; Iron Body Bronze Mounted for steam, water or oil service, and All-Iron for handling fluids which attack bronze but not iron.

Lunkenheimer "Clip" Valves not only withstand 100 lb. W. S. P., but also the stresses caused by expansion and contraction, vibration, weight and settling of the pipe, and other severe service conditions.

Simplicity of design permits of quick and easy disassembling for cleaning or repairs, and the renewability of all parts subject to wear materially prolongs the life of the valve as a whole.

Distributors of Lunkenheimer Products are located in all oil producing centers. They can fill your requirements promptly from stock.

The Lunkenheimer **"Guide to Better Service"** is a handy reference book, conveniently arranged to enable you to find at a glance, Valves and Engineering Appliances for any service. **A copy of this interesting book is yours for the asking. No obligation. Just fill in and mail coupon.**



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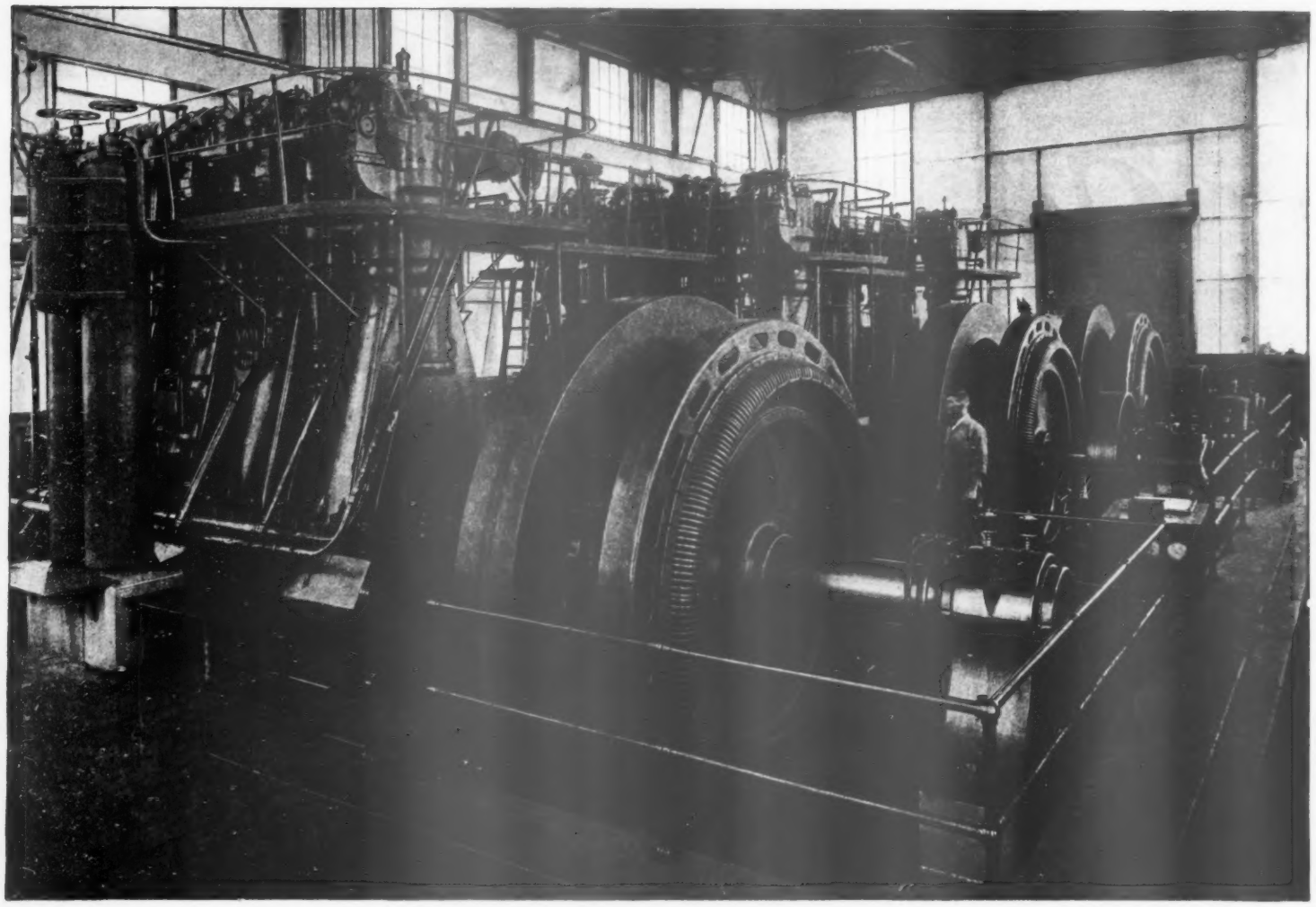

Three 500-b.hp. McIntosh & Seymour Diesel Engines in constant service since 1916. During some years the load factor has been over 90%.

Why Good Diesel Engines Are a Safer Investment Than Steam Units

PRIME MOVERS seldom wear out. They become unprofitable only because newer and more efficient types render the older ones obsolete.

The sustained high thermal and mechanical efficiencies of a Diesel engine make its purchaser reasonably safe against further improvements that would depreciate his investment, whereas even the most refined steam units have often been scrapped within a few years because they could no longer compete with later steam types.

As 98 per cent of the Diesel engines built in the United States since 1904 are still in service, the life of this type cannot yet be accurately estimated, but mechanical depreciation from service can be figured conservatively as no greater than that of the steam engine. No McIntosh & Seymour Diesel Engine has yet become obsolete, and the earliest models, built 12 years ago, are still holding their own against all comers.

The operation is equally as smooth as that of a steam unit, which means that the wear and tear should be no greater. The life of a steam engine is generally conceded to be around 25 years, and the life of a Diesel engine should be no less.

It is also self-evident that as recognized leading builders, we would never have abandoned large steam prime movers completely for the Diesel engine, unless the latter had better possibilities of long life as well as of fuel and labor economies. Within a wide range of usefulness, McIntosh & Seymour Diesel Engines will show very decided economy improvement over any steam prime mover.

Our Engineers will submit proof and give you reliable comparative figures if you will write us about your power needs.

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McINTOSH & SEYMOUR DIESEL ENGINES

KENTUCKY-TENNESSEE

(Continued from Page 60)

well. At 1,080 feet the new well struck the Vicksburg lime formation.

Eastern Kentucky

Only one completion was reported from the eastern Kentucky fields for the week, and that was the Petroleum Exploration Co.'s No. 4 on the Spencer heirs farm, District 6, of Wolfe County, and is good for 25 bbls. initial. The same company is drilling No. 1 J. B. Smith farm, in Owsley County, in the gas belt which this company has developed.

Some interesting development work is being done in the Grayson area of Carter County, and, while the wells are not large, the territory is so shallow that even a stripper will prove commercial when hooked onto power pumping plants.

Western Division

It is a race now between the Glasgow Field of Barren County and the Owensboro district, comprising Hancock, Ohio and Daviess Counties, as to which will maintain first place in development work. The Owensboro Field has the best of it with three counties to play in, while Barren County is going it alone.

Advice from Crofton, Christian County, in southwestern Kentucky, is that the wildcat of the Petroleum Exploration Co., on the W. E. Denton farm, was drilling close around 400 feet. This is to be a deep test with a view of testing out all known lower formations.

Quietude prevails in Warren, Allen and Cumberland Counties, especially in the Cumberland-Monroe end, where completions are scarce, which accounts for the small production of new wells from week to week, as it is the usual gusher developed in Cumberland County that helps increase the production in the weekly reports.

Owensboro District

The creation of a new oil field within the Owensboro territory has been brought about by such quiet methods that the general public has not been apprised of its importance. Even among the citizens of Owensboro the impression is general that there are a few unimportant producing wells in the territory, and that a few people have benefited thereby. That the daily output has grown to the large proportion of 1,175 bbls. will be news to nearly all. The authentic figures of the Indian Pipe Line Corp., which takes the entire product, show these figures to be correct. The full output of the local Owensboro Field, as well as that from the Warren County Field, and a large portion of Allen County, passes through Owensboro underground, crosses the Ohio River at Owensboro, and is delivered to the Indian Refining Co.'s large plant at Lawrenceville, Ill. The price paid for the oil is an average of $2.20 per barrel delivered to the pipeline. One-eighth of the amount received goes to the owner or lessee of the land, all of which is held within the territory. Part of the remaining goes for labor, and the bulk of the profits inure to men who have moved into Owensboro and make it their home, says the Messenger.

Of late numerous large oil operating companies have been attracted to the field, and large acreage not now in the developed field has been leased to field agents of these corporations, who are already on the ground, and have begun operations. The Ohio Oil Co., one of the largest well owners in the country, has already brought in two wells, and has rigs working on other locations. Still others are sending their geologists over the field seeking locations to lease up acreage. Experts declare the wells give every indication of being long lived, and other indications show the development is but in its infancy. The present season will find the greatest activity since the beginning. The Indian Pipe Line pumping station is located at Doyle, east of Owensboro, on the L., H. & St. L. Railroad and the field headquarters appear to be at this time the town of Whitesville, where this 1,175 bbls. of crude is collected daily by gathering lines then run into the trunk line. Some few wells have not yet been connected with the pipeline, because production is too small to run the lines to them. These wells, of course, at this time are not pumping beyond the small lot their tanks will hold.

At this time 257 wells are connected with the pipeline and five or six are in line for connection during the next few days. Each week more wells are being added, but these are not reported until the first of the following week. The field is rapidly being extended, and while a few dry holes here and there are struck, these are but a small percentage of the wells drilled. Operations in the week just ended have been handicapped by lack of water for the boilers furnishing the power for drilling. Water is being supplied from a distance for these engines now running, and more will be hauled to put the power plants to work early in the week.

The No. 13 well on the Lucinda Crowe farm, owned by C. E. Daugherty and others, reported at 25 bbls., is said to be showing better after given a shot and reported one of the best looking producers yet found in the field. Same company's No. 2 Oat Neal farm is good for about 2 bbls. settled from the Barlow sand, although its first 24 hours production was several times that number of barrels.

The White Plains Oil & Gas Co. got a surprise when its No. 5 on the J. J. Midkiff farm in the Midkiff Pool came in a dry hole, while No. 4 on the J. R. Ellis 50 acres is good for around 20 bbls. after pumping for a few days. The Spice Knob Oil Co.'s No. 6 Bert Thompson 40 acres is estimated at 5 bbls. from the Jett sand.

J. W. Loman, trustee, has drilled in No. 4 on the J. Bob Ellis 50 acres better than a 20-bbl. producer.

Leasing in Muhlenberg County

One of the latest spots for active leasing is in Muhlenberg County, where there has been a good number of new operators quietly working and obtaining leases. Three lots of oil men have begun a drive on the Muhlenberg area, branching over into Butler County. In this last county the prospects are said to be good, but not up to the Muhlenberg outlook.

Barren County

In the Lecta Pool of Barren County, the Esslinger Oil Co.'s No. 9 on the C. B. Jones farm is estimated at 20 bbls. and No. 10, same farm, struck shale from 347 to 382 feet, where a good pay was found and looks like a 20-bbl. producer.

In the Knob Road district, Ziegler Brothers' No. 1 on the Dauter Brothers lease is showing for better than 5 bbls., adding a few locations to the field. In the Gorby Pool, Lew J. Emery, Jr., Sons' well on the M. S. Chamberlain farm, a little in advance, and No. 2 same farm is drilling.

In the Emery-Moore Pool, Fred C. Moore has a fishing job on top of the sand at No. 11 Howard farm.

Other Developments

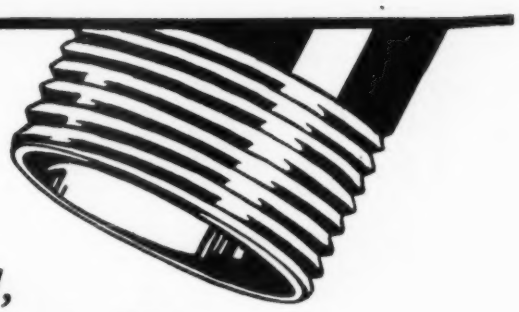
In the Scottsville Field of Allen County Mealey & Mealey's No. 20 on the M. J. Lewis farm is a 3-bbl. pumper at 307 feet, while H. A. Dixon's No. 1 Yates farm, in the Mt. Aerial district, is reported better than 5 bbls.

In the Bowling Green Field of Warren County, Paul Cooksey's No. 9 on the J. W. Covington Block 8 farm, is reported good for 2 bbls. at 383 feet, while the No. 6 of Stinson and Morrow on the E. Morgan farm produced but 1 bbl. at 570 feet. Ruther Turner is drilling No. 5 on the Ora S. Davenport 25 acres and C. P. Tannehill is drilling No. 1 George Perkins farm.

MICHIGAN FIELDS

(Continued from Page 58)

well of the Gordon Petroleum Co. on the Henry Schwannecke farm, in the southeast corner of the northeast quarter of Section 33, Buena Vista Township, failed to make any showing of oil in the Berea sand, does not mean that there is no chance for the finding of production from another and deeper formation, anyway,



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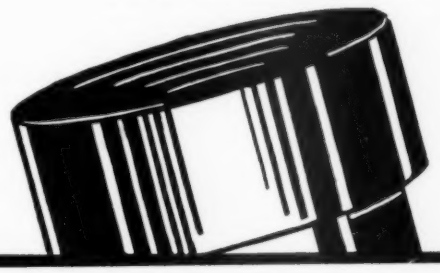

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the well is being sent deeper with the idea of testing out the Saginaw sand where oil was first discovered within the city limits of Saginaw in 1812. This test is fully 5 miles to the southeast of the Saginaw Field proper and may open up something more productive than the Berea sand has done up to this time. It is fortunate that the company drilling this hole can go to most any depth it wishes.

The Ohio Oil Co.'s well on the Mershon-Eddy-Parker tract in Carrollton Township, east some distance from present production, should reach the Berea sand within a week or so. There are now seven wells under way east of production and in Carrollton Township, while in Saginaw Township there are from 8 to 10 drilling wells and others ready to start just as soon as drilling tools arrive.

With a block of 1,500 acres under lease in Frankenlust Township, Bay County, a group of Saginaw, Bay City and Detroit men are planning to drill a well somewhere in the territory under lease in the near future. The leases were taken in the name of Lloyd T. Crane, a member of the group. The exact location of the well has not yet been announced.

Matthew Heppler and others are starting a well on the Mrs. Caroline Heppler farm, on the Shattuck road a short distance west of the Hermansau road and close to the Casper Ulrich farm where the Bliss Petroleum has one producing well and are preparing to drill three more at once. J. B. Reed, an Ohio contractor, will do the drilling on the Heppler well.

The Gardner Petroleum Co. struck the top of the Berea sand in its Schwanneke test at 1,852 feet and passed through the Berea at 1,976 feet, there being 124 feet of Berea sand.

Leasing Activities

The bringing in of a duster on the Boldebuck farm, a mile or more north of production, and the failure of the Gordon Petroleum Corp. to find commercial production in the Berea sand on the Schwannecke farm, in Buena Vista Township, 5 miles southeast of the discovery well of the Saginaw Field and southeast of Saginaw, do not stop the leaser from gobbling all unleased acreage most anywhere within the boundaries of Saginaw County or Bay City to the north. The late leases left for record indicate the activity displayed by the leaser during the past several days.

An assignment of leases was made by Robert Hazzard to Dr. Nelson F. McClinton and Louis Levinsohn on 661 acres in Brant and Brady Townships, Saginaw County, comprising leases on the Adin Kingsbury 104 acres in both townships; Melvin Griffus, 97 acres; Maurice Griffus, 160 acres; Frank Griffus, 110 acres; Charles G. Stearns, 80 acres, all in Brady Township, and Stephen Haney's 120 acres in Brant Township.

The Saginaw Petroleum Co. recorded leases on 819 acres, comprising six leases in Bridgeport Township of 314 acres, 75 acres in Frankemugh in one lease and five leases in Spaulding Township of 430 acres.

Richard A. Cross, trustee, filed 10 leases in lots of four acres or less in Carrollton Township.

Lloyd T. Crane, trustee, filed five leases, 399 acres, three leases in Knockville Township, one of 160 acres in Saginaw Township and one of 159 acres in Frankenmuth Township.

The Superior Oil Co. secured lease on two lots in the Deindorf addition to Saginaw and the 60-acre farm of James Harris in Birch Run Township.

Morris F. LaCroix secured a lease on 80 acres and the Boston-Southwestern Oil & Gas Co. 20 acres, and a 14-acre lease was secured by Henry L. Smyth in Bridgeport and Taymouth Townships. A. H. Russell secured a 4-acre lease from Phil Leclair in Saginaw Township.

Henry A. Martin secured a lease on the A. J. Card 40 acres in Thomas Township; Charles H. Shepard, 60 acres in Saginaw and Thomas Townships; Eli Truckne, 80 acres, and Mike Slancic, 80 acres, both in Spaulding Township.

The Sun Oil Co. secured a lease on the Louis Voght farm in Saginaw Township and the Farmers Mutual Co. five leases on lands in Birch Run Township.

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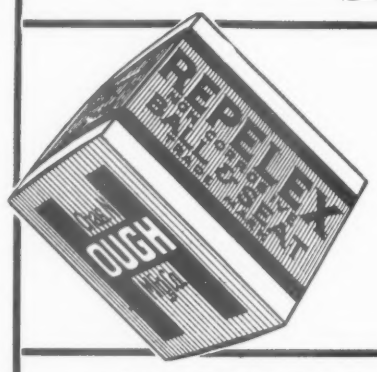

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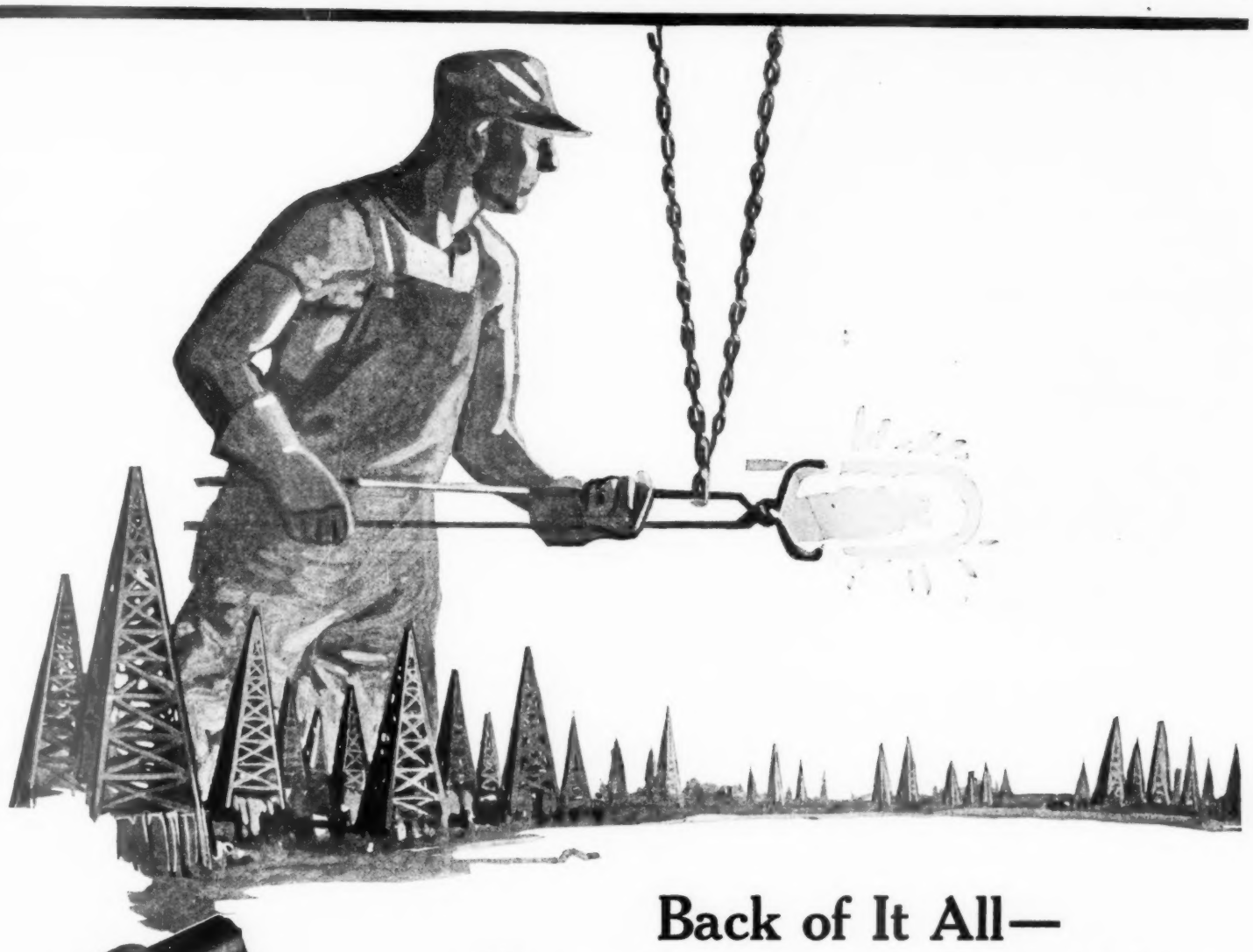

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CALIFORNIA FIELDS

(Continued from Page 56)

as to what may be expected because of the severe crushing in this area. The north and south fault line practically parallels the ocean front and is thought to be several hundred feet beyond the shore line at this point.

The California Petroleum's No. 1 Buck, in the extreme northern part of Huntington Beach and a little over a mile north of production, will undoubtedly lead to further work, although it will be prosecuted according to approved oil field practice, due to the fact that the acreage is held in fairly large blocks. The California Petroleum has approximately 500 acres under lease, some of which of course will not be productive. No further work has yet been undertaken but it is logical to assume that both this company and the Standard will spot at least one or two locations if the extension well maintains its present production of 300 bbls. daily. The California Petroleum has accomplished a fine piece of work and, while it will benefit by this completion, structural maps indicate that the Standard will benefit to a larger extent.

Ventura

The Shell's No. 22 Gosnell, finished early this week in the Ventura Avenue Field, was one of the livest ever completed in this area. The initial flow of 5,416 bbls. ranks it as the second largest well to be finished in this district and, judging by the casinghead pressure, 960 pounds, it will probably not register any immediate decline. The well, which was carried down to 6,125 feet and is producing 3,000,000 feet of gas in addition to the oil, which tests 30.4 degrees, is the deepest producer in the field at present and, although it showed an extremely high gas pressure, the drilling crew did not experience any unusual difficulty in completing it. The Shell has been running about 10 strings of tools in this district for several months and will undoubtedly continue at this rate at least for the next few months, as it seems to be the company's policy to start a new hole as soon as a crew is available. The company's next spud will probably be No. 10 Edison, followed by No. 11 Taylor, the rigs for which have already been erected.

The General Petroleum's No. 3-A Barnard has been keeping its crew on the jump for a week or ten days and it has been found necessary to keep this hole well mudded up with hematite because of the heavy gas pressure at 5,825 feet. Drilling is held up with a stuck drill pipe but it is believed this difficulty will be overcome shortly and the well brought in good for somewhere around 2,500 bbls. daily. Field reports indicate that William G. McAdoo and associates are contemplating drilling a test on the John Dent ranch of 150 acres lying in the extreme southern part of the field, although this could not be confirmed. Mr. McAdoo is at his summer home in Santa Barbara but field men say plans are being made to grade a road to facilitate the movement of material and equipment and spud will be made within 30 days. The Dent ranch is approximately one-half mile south of the Associated's No. 18 Lloyd, which was brought in last week flowing 1,390 bbls. a day. The McKeon interests, which recently took over some acreage north of the field, have not yet shown any disposition to start work and are apparently awaiting the outcome of G. J. Magenheimer's well to the south, which is down 3,737 feet.

The Associated was the victim of the first fire suffered by any operator in the history of the Ventura Avenue Field when gas from its No. 5 Lloyd became ignited while efforts were being made to remove the 4¾-inch casing and, although the company's field men made every effort to extinguish the blaze, their efforts were futile and the rig and two small sheds of well equipment went up in flames. No. 5 Lloyd was originally finished in September, 1922, previous to the development of the deep zone and the crew was removing the oil string preparatory to deepening it when the gas became ignited. The well was a good one, doing 2,100 bbls. daily when finished a little over three years ago, but had declined to such an extent it was considered advisable to add another 1,000 feet of hole to get in on the deep flush production.

Long Beach

The past week saw six wells put on production in the Long Beach Field, all in the northwest extension. The Henderson Petroleum topped the list with a 430-bbl. flowing well from the deep zone at 4,813 feet, the oil testing 22.8 degrees and being exceptionally clean. The Umpire Petroleum successfully completed its No. 36 Cerritos after redrilling and deepening it to 4,840 feet and, as a result, boosted its daily production 425 bbls., the output testing 22.4 degrees and showing a cut of 2 per cent. Barring the development of mechanical trouble, the company will list No. 39 Cerritos for completion in the deep sand within two weeks and, since the liner is being fished out of No. 40 Cerritos, this well will also be carried down and finished at an early date.

The Marine Oil Corp., which, it is understood, will merge with the Julian Petroleum in the near future if the stockholders approve, recompleted its No. 55 Cerritos after deepening it from the upper to the lower horizon at 4,854 feet. This well, finished without a liner or oil string, is flowing 285 bbls. of 22.7 gravity oil which registers a cut of slightly less than 2 per cent. The northwest extension is still yielding several fairly good wells each week and will probably continue to do so for another month, at which time completions in the deep zone should be less numerous and register a considerably smaller initial output. The upper sand is pretty well shot and, since the lower horizon does not afford a much greater penetration, this zone should also become depleted in a relatively short time. Prior to the development of the lower zone not over 25 per cent of the operators in the extension had a chance to come out even but, with the additional sand opened up, there is a possibility that 50 per cent of the operators will eventually be enabled to dispense with the red ink.

Smaller Than Expected

McGinnis & Miller's No. 2 Cerritos, redrilled and deepened to 4,855 feet and finished with a 3-inch liner, was good for 185 bbls. of 21.6 gravity oil, the output cutting approximately 10 per cent. This well, somewhat smaller than anticipated, has apparently drilled into bottom water, as reports indicate it has an 85-foot penetration in the oil sand, a little too much at this point. The Retsof Drilling Co.'s No. 83 Cerritos, originally started by Walker, Wilson & Gordon, was good for 292 bbls. of 22.6 gravity oil daily. This hole, which was carried direct to the deep zone at 4,823 feet, was left open below 4,775 feet.

C. W. Camp's No. 1 Cerritos was an unusually small well in the upper zone at 4,410 feet, the maximum production being approximately 90 bbls., of which 10 per cent was water. No. 1 Evans Cerritos of the Bush-Voorhies Oil Co. is still held up with water trouble in the deep zone at 4,850 feet and, although the well is making approximately 300 bbls a day, 25 per cent of the output is water. Walter P. Temple, who has undertaken to develop a third productive horizon in the northwest extension through the medium of his No. 5 Cerritos, is drilling ahead in a gray sandy shale at 5,065 feet and, although there have been no favorable indications to date, he may pick up something around 5,100 feet. The California Petroleum's deep test, No. 1 Bixby, east of the northern part of the extension, is down 5,478 feet with only an outside chance of securing production.

Derricks vs. Residences

The Long Beach City Council is still debating whether to allow drilling in the exclusive Belmont Heights district or remove the prevailing restrictions and, after a lull in the year-old battle of oil derricks versus beautiful residences, the long drawn out fight has again been renewed, when attorneys representing Mrs. Virginia Gundry applied to the City Council

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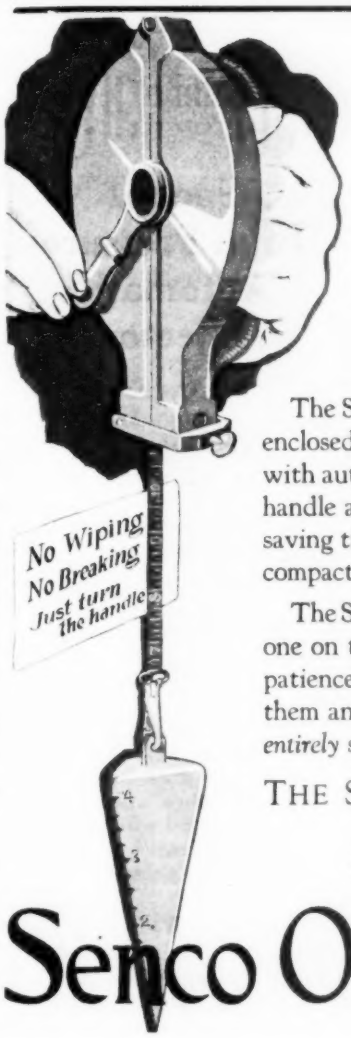

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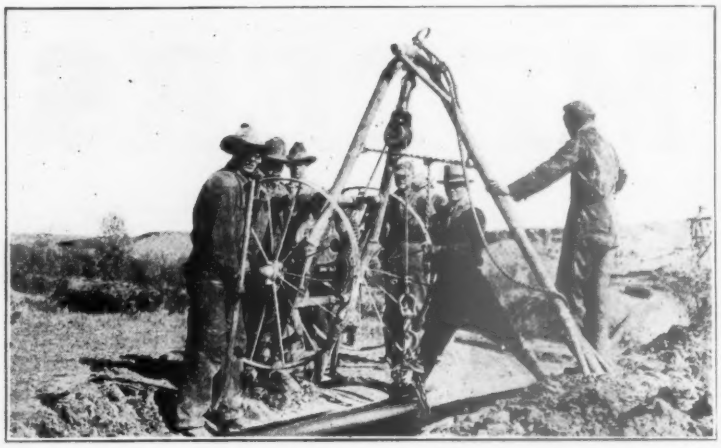

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for a special permit to erect an oil derrick in the section bounded by Fifth and Sixth Streets, Quincy and Roycroft Avenues in the area under consideration. The location is near the city's new 60-acre recreation park and within a few blocks of the new Woodrow Wilson High School.

Bitter opposition to this proposal and similar ones that have been made to the council during the past year developed. Several mass meetings have been held and a storm of protests has been showered on the council when previous applications for drilling perm'ts in this and other residential sections have been made. The council referred the question to its derrick site committee, which will investigate the location and report back to the Council next Thursday.

Inglewood

The Associated chalked up a new well in the Inglewood Field early this week but it was a rather unsatisfactory completion, the output cutting approximately 2 8per cent. This new producer, No. 50 Vickers, drilled to 2,535 feet and finished with an 8¼-inch oil string carrying 461 feet of reinforced Emsco, pumped 370 bbls. of 17.1 gravity oil during the initial 24 hours. The completion of this well practically winds up drilling in this area, although each of the several operators has one or two cleanout jobs pending. Not a single development of interest materialized at Dominguez during the past week and, due to the limited amount of drilling being done in that area, nothing out of the ordinary is anticipated for some time. Operators in this field are wisely holding off development of the deep zone until a more advantageous time. When the Union and Shell need production, however, this is the district which is expected to fill the order.

The Associated and General Petroleum listed recompletions in the Torrance Field, both wells being former producers which had sanded up. The former's workover was No. 1 Watson, cleaned out to bottom, 3,530 feet, and returned to production pumping 122 bbls. of 16.1 gravity oil. The General Petroleum's rejuvenated well was No. 9 Carson, put on the beam at 3,370 feet and returned to production pumping 35 bbls. daily. The Chanslor-Canfield Oil Co. failed to add its usual weekly completion but will probably bring in a new well, No. 73 del Amo, during the next 10 days. The R. & D. Oil Co. finished rigging up No. 3 Craven some time ago but spud has not yet been made.

Santa Fe Springs

The General Petroleum has just spudded in its No. 21, the first of five new wells to be drilled by this company in the Santa Fe Springs Field following a period of inactivity. Rigs for Nos. 22, 23 and 24 have already been completed and rotary equipment will be rigged up immediately. The Standard has a foundation in for No. 19 South Whittier Community and should have rig timbers on ground within a few days. The new work being done by the General Petroleum and Standard is due to the completion of several fairly large flowing wells during the past month or two. The Standard made a production test of No. 68 Baldwin in the Montebello Field early in the week but, judging by the output, 240 bbls. of 26.4 gravity oil, cutting 15 per cent, at the well may require another cement job at 3,465 feet, although it shows signs of cleaning up. In addition to this test, the company made a grade for No. 69 Baldwin, put in a foundation for No. 61 and hauled in material for No. 4 Howard & Smith. The rig is up for No. 1 Benedictine and the boilers are now being placed in position. The St. Helens Petroleum recemented No. 3 Mulholland and finished rigging up No. 13 Monterey for an early spud.

Record for Rotary

The Chanslor-Canfield Midway Oil Co. broke the world's record for deep rotary drilling established by E. J. Miley with a 7,591-foot producer in the Rosecrans Field and it is quite possible that the well, which made this new mark, No. 96 Olinda at Fullerton, will be carried down to 8,000 feet, if there is any possibility of developing production by this additional hole. The company has just passed the 7,780-foot level, considerably deeper than any hole ever drilled and, since first-class equipment is being used, another few hundred feet is entirely feasible if the outlook is at all favorable. Union Tool rotary equipment is being used throughout including the Westinghouse reduction gear and motors. Dunn tongs, Reed bits and Standard seamless pipe are also being used on the job. This hole will undoubtedly prove quite valuable from a geological standpoint and, although it is reported to be 586 feet off the perpendicular, this deviation is not surprising considering the depth and formations passed through.

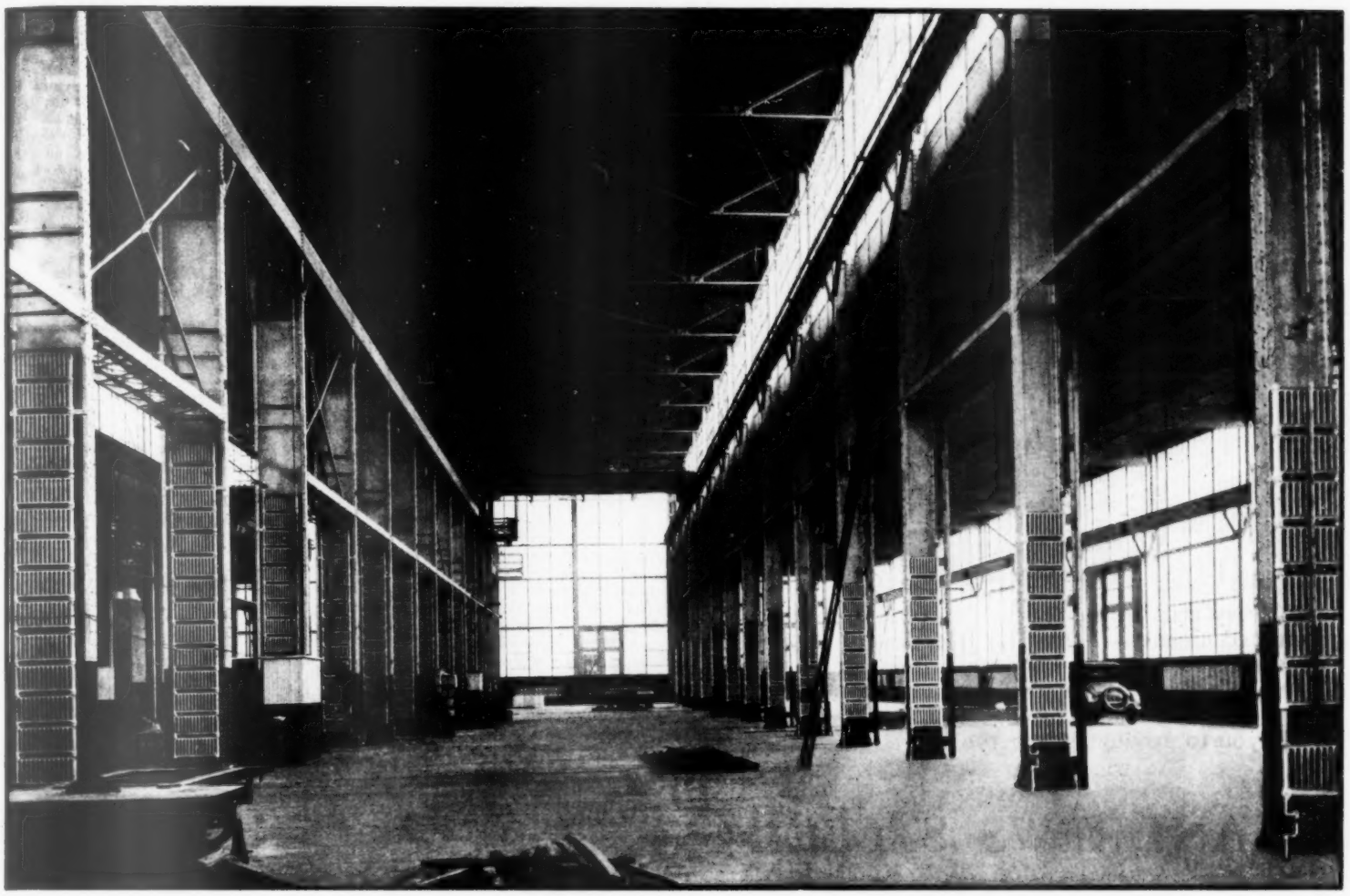
The Brea Canyon Oil Co. finished a splendid flowing well at Fullerton when its No. 39 was turned loose from 4,371 feet, the hole being finished with a 6¼-inch oil string carrying 1,275 feet of perforated. This new producer, flowing through a 1½-inch bean under a pressure of 600 pounds, tanked 1,420 bbls. of 26.2 gravity oil during the first 24 hours. The company does not have any other incompleted drillers but it is believed, in view of the fairly large production secured in No. 39, that the crew will be put to work on another hole within a few weeks. The Union Oil Co.'s No. 57 Graham & Loftus, a deep test in the Coyote Field, has just passed the 6,100-foot level, and since the last core taken at 6,075 feet did not show any change in the formation, the outlook is rather discouraging.

Midway-Sunset

The Balboa Oil Co.'s No. 55 in Section 24-31-23, was the largest well added in the Midway-Sunset district during the past seven days, although the Obispo Oil Co.'s No. 11 in Section 32-12-23 showed a preliminary flow of approximately 700 bbls. daily. The latter well, however, showed a cut of 50 per cent and the company is tearing out the rotary equipment and installing cable tools preparatory to recementing and recompleting it as a good producer from the 4,000-foot level if possible. The Balboa's latest addition came in flowing 350 bbls. of 23.2 gravity oil from 4,106 feet and, judging by the present status of No. 52 on the same property, standing cemented at 4,107 feet, the company should list another good completion during the next 10 days. King Gillette finished two more shallow producers, Nos. 4-A and B-12, in Section 21-31-22, both being 25-bbl. pumpers from the 900-foot level.

The United recompleted the former Midway Pacific's No. 2 in Section 24-31-22, after cleaning it out to bottom, 2,080 feet, and it is back on production, pumping 20 bbls. of 19.8 gravity oil daily. No. 1, on this property has dropped off considerably during the past few months and it is being listed for a clean-out job. The Standard returned No. 17 Pacific in Section 31-12-23 to production after cleaning it out and the well is pumping 116 bbls. from an even 2,000 feet. The Union increased its list of producers in the Elk Hills Field as a result of the completion of No. 15 Federal in Section 26-30-24. This well is pumping 167 bbls. of 21.1 gravity oil from 3,494 feet. There were several leases and purchases of acreage made in the Midway-Sunset Field during the week, the Taft Oil Well Drilling Co. figuring in one and the Moxey Realty Co. in another. The former purchased the north half of Section 19-31-23, a few miles northeast of Fellows, from Maymie Spears, executrix for the estate of James Spears, for a consideration of $12,500, while the latter closed a deal with A. G. Weber of Oakland for 20 acres in Section 34-30-22. The property in Section 19-31-23, is under lease to the Midway Royal Petroleum Co.

Considerable work is getting under way in the Mt. Poso area, notwithstanding that water is difficult to secure, and the roads into this new district are not in any too good shape. The road problem, since heavy trucks are dilevering considerable material, is attracting much attention and the supervisors of Kern County have agreed to assist the oil companies in constructing the necessary dirt roads to expedite delivery of oil field material.



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The Woody and Jack ranch road bisects the eastern part of the district and this, together with the Famosa-Kernville road through the northern part of the area, is still in good shape, although some work must be done on each before the rainy season sets in. A considerable part of the rig material and equipment going into the Mt. Poso Field and adjacent territory is moved out of Bakersfield, a distance of approximately 20 miles, although core barrel distributors and other specialists have headquarters in Taft, about 30 miles away.

Judging by the present condition of the various wells in the Mt. Poso district, something definite should be ascertained of the field's potentiality within two weeks and it seems to be the consensus of opinion that it will result in a considerable amount of work during the next six or eight weeks, unless of course the price of heavy crude takes a tumble. The Shell's No. 1 Vedder is again back on production and the company is constructing a 55,000-bbl. tank directly south of the discovery well in Section 9-27-28. The Barnsdall has a very interesting test in Section 28-27-28 and, although it has not yet picked up the pay, notwithstanding the hole is down 2,220 feet, the company is by no means discouraged. On the contrary, the Barnsdall has some excellent looking acreage which will prove productive when developed. The company's well in Section 8-27-28, which is in proven territory, will probably be spudded in early next week as the derrick is practically all rigged up. The Petroleum Securities should also make a spud in Section 8-27-28, as the rotary equipment is all in.

The Associated, although it holds fee title to several hundred acres in the Mt. Poso area and along the Kern front, has not yet undertaken any development work and it is understood the company does not feel justified in drilling up this acreage with the present low price of oil, particularly as there are no stringent lease requirements to fulfill. Tom Piper, who is the lessee of something like 5,000 acres in this general area, is expected to put down several tests in the near future, although up to the present he has been content to wait developments. The Chanslor-Canfield Midway Oil Co. has been quite active in the Famosa-Poso Creek area for some time and an announcement has just been made that the company has secured an additional 80 acres in Section 4-27-27. The Modoc Petroleum is making preparations to offset the Shell's No. 1 Vedder in Section 9-27-28 and the rig is going up for early work. It is a wooden derrick located in the south half of the northeast quarter of Section 8-27-28.

SOUTHWEST TEXAS

(Continued from Page 42)

2,570 feet in No. 1 de la Garza in Block 12 of Survey 336, a mile north of the Associated-Carson discovery well. It should be on the 2,600-foot sand, provided the sand extends that far north, by this week. Brashara-Neal have got no farther than a location in Block 8 of Survey 689. Poor Boy Oil Co.'s No. 1 de la Garza in Block 22 of Survey 335 has erected a derrick.

Randado Pool in Jim Hogg

Grayburg Oil Co.'s No. 3 Weil in Block 15 of Survey 81 of the Randado Field, 300 feet north of the No. 2 and 150 feet from the west line of the block is spudded in and No. 4, located 300 feet feet north of No. 3, is spudded in and Grayburg is moving in two additional rigs to drill its lease. Johnson and others (American Well & Prospect Co.) have set casing on No. 7 Palacious in Block 14 of Survey 291 and are drilling at 900 feet in No. 8 in Block 19 of Survey 291 and have the derrick up for No. 9 in Block 19 of Survey 291. Houston Gulf Gas Co. is on the sand at 1,250 feet in No. 11 Palacious in Block 11 of Survey 291. Wheelock & Collins have derrick up for No. 4 in Block 21 of Survey 291. C. O. Maddox and E. L. Smith Oil Co. have set casing in No. 3 Palacious in the north part of Survey 291. Brashara & Maddox have made location for No. 1 Weil in Block 8 of Survey 81, a half mile ahead of production on the north and Shankle & Corry have the derrick up on Block 9 of Survey 81, still farther north. Magnolia is drilling No. 4 in Block 10 of Survey 291 and has set casing in No. 8 Palacious in Block 6, the location being 150 feet from the south and west lines, setting at 1,285 feet and has the derrick up for No. 9 Palacious in Block 6 of Survey 291, 450 feet from the south and 150 feet from the west line, and is drilling at 2,299 feet in No. 6 Merchant State Bank in the northwest corner of Survey 415.

Henne, Winch & Fariss

Magnolia Petroleum Co.'s No. 12 "B" Martinez in Survey 276 of the Henne, Winch & Fariss Pool in Jim Hogg County is drilling at 1,150 feet. It is located 700 feet from the east line and 150 feet from the north line. Magnolia's No. 12 Killam-Martinez in the same survey has erected derrick 1,374 feet from the east line and 1,020 feet from the north line. No. 14 Killam-Martinez 1,074 feet from the east line and 1,020 feet from the north line is a location only.

Kitselman & St. Albans

In the Kitselman & St. Albans proven area their No. 4 Holbien on Texas Pacific Coal & Oil Co. lease has topped a sand at 2,075 feet. No. 40 Holbien on Block 30 of Section 12 of the Holbien ranch dry at 2,196 feet, the regular producing horizon, and reported abandoned, was not abandoned but is drilling deeper and is now at 2,650 feet. No. 41 Holbien in Block 41 of Section 11 with casing set is testing at 2,135 feet. No. 42 in Block 9 of Section 15 is on the sand at 2,118 feet. No. 43 in Block 9 of Section 15 is on the sand at 2,115 feet. No. 44 has the derrick up in Block 5 of Section 11, the location being 150 feet from the north line and 99 feet from the east line Location is being made for No. 45.

Mirando Valley

In the Mirando Valley old field where the first discovery commercial well was brought in in 1921 O. W. Killam is drilling on Survey 307 immediately north of production. No. 1 Hinnant on that survey was dry. No. 2 last week tested dry at 1,561 feet and is drilling deeper, being now at 2,600 feet and drilling No. 3 in the same survey tested dry at 1,547 feet, and is making another test at 1,744 feet.

Luling Field

Golden West Oil Co. has set casing in the chalk at 1,707 feet in its No. 2 Fields in the east end of the Luling Field in Caldwell County. There is always a little oil in the Austin chalk and it will attempt to take in every possible production down to the Edwards.

Ina Field

Arnett Oil Co. is preparing to drill in and test its No. 4 Nixon in Medina County in the Ina Field. Casing was set at 924 feet on a rock. Golden West is putting its No. 6 Schmidt, in the Ina Field, on the pump.

SOUTHWEST WILDCATS

(Continued from Page 42)

at 2,191 feet its No. 1 Dinges. It topped the soft chalk at 2,135 feet and stopped in the chalk at 2,191 feet, the formations running too low to warrant further drilling. The company is skidding the rig to the north to the Riddle tract. Persistence in drilling in this territory seems to be warranted by the evidence of a faulted condition as readily disclosed by the depth at which the chalk is hit in the logs of various wells and in the showing of oil in the Serpentine and Edwards in the first two wells of Reiter-Foster. There are scant surface conditions to guide, however, in making the locations but the subsurface geology as disclosed by the logs of the tests drilled seems destined soon to get production or condemn the territory.

Bexar County

In Bexar County, Marland Oil Co. is ready to start on the first of its tests with large type core drill rig and will core drill to the Edwards. Marland spent a large sum with a small core drilling machine in this territory in eastern Bexar County, at St. Hedwig and

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In All Fields

seemingly proved a structure and the first test drilled to the Edwards proved dry. Marland has several thousand acres and additional core drilling is to take place before the block of leases is finally abandoned.

The southern half of Bexar County and central part of Guadalupe and Caldwell Counties and on up through Bastrop and into Milam County is all in the same faulted zone. Southern Bexar County is destined to see a great deal of additional drilling. Humble is not through with its block which comes up almost to the south limits of San Antonio. Rycade Corp. has a big block of leases around Elmendorff, farther south, and negotiations have been under way to have the block drilled. Marland is also core drilling a big block of leases in the western part of Bexar County. Utah-Texas Co. is starting its second test on the Ivan Vick farm, 12 miles south of San Antonio. No. 1 was dry and has been abandoned.

Webb County Wildcats

One of the most interesting wildcat tests in the Laredo territory is the Hadley-Marland test on Section 49 in Webb County, a few miles to the northeast of the Carolina-Texas gas and oil area and far enough away that there is no chance of picking up an extension to that pool, but close enough that much the same sands if present will be picked up and are looked upon to do the producing. The geology on which the location is based was carefully worked out in advance and the Bordo well drilled last year and located a mile south of the Hadley-Marland test at 2,125 feet had 30 feet of oil on top of a column of 1,100 feet of water after it had been bailed and allowed to stand over night. All the Mirando pools and the Carolina-Texas Pool lay along the Reynosa Escarpment and the Hadley-Marland well is the escarpment a little to the north and east of Carolina-Texas where the conditions seem to indicate the probable location of another pool. The Bordo well strengthens the argument. A few miles on beyond this, farther up the escarpment, O. W. Killam leased 11,000 acres from W. C. Billings recently which he believes covers another producing spot along the escarpment. The Hadley-Marland well was drilling at approximately 700 feet late last week and should be down to the sand horizon of the Bordo well by the last of this week.

W. C. Ritchison is standing at 2,503 feet in his No. 1 Billings on Survey 71, 10 miles northeast of the Carolina-Texas Field. Benedum & Trees have a location on Survey 10, 2 miles southwest of Ritchison. O. W. Killam is drilling at 2,840 feet in No. 1 Driver in Survey 52, 3 miles southwest of the Carolina-Texas Field. C. O. Maddox and E. L. Smith Oil Co. are standing at 200 feet in No. 1 Laurel in Survey 333, 5 miles south and a little west of the Carolina-Texas. National Refining Co. is drilling at 2,300 feet in No. 1 Benavides in Survey 700, 5 miles southeast of Carolina-Texas. Cole Petroleum Co. is in lime and lignite at 2,457 feet in its No. 10 "B" Benavides in Block 5 of Survey 3, and drilling at 2,400 feet in its No. 9 "A" Benavides in Block 7 of Survey 753. These are each a few miles west of the Cole Field.

Magnolia Petroleum Co. is taking a core at 1,945 feet in No. 1 Neal on Block 12 of Survey 132, a few miles southwest of the Cole Field and has made a location for No. 1 Page-Garcia in Survey 611, a couple of miles on farther southwest. Neal-Ramsland's No. 1 Lopez, in Survey 309, between the Aviators and the old Mirando Valley Pool, is drilling at 2,500 feet.

Jim Hogg Wildcats

Moody Oil Corp.'s No. 1 Palacious, in Block 13 of Survey 287, a mile east of the Randado Field in Jim Hogg County, is down to 1,300 feet which is the producing horizon of the Randado Field. Within a few days it should be known whether it will pick up the Randado sand there. Hazlitt-Simmons are standing at 100 feet in No. 1 Schroeder. It is in Block 10 of Survey 16 and is 7 miles south of the Randado Pool. Hoad and others have completed a water well at 436 feet in Survey 247, several miles southeast of the Randado Field, and will resume on No. 1 Palacious, a wildcat test. Simms Oil Co. tested dry at 2,199 feet No. 1 Leyendecker, in Survey 143, 5 miles south of the Randado Pool. It is being abandoned. National Oil Co. is drilling at 200 feet in No. 1 Allen on Survey 23 of the Wilbur Allen ranch. O'Byrne and others are drilling at 750 feet in No. 1 Palacious in Survey 230, south and a little east of the Randado Field. L. M. Holden has reached 2,900 feet in his No. 2 Jones, a few miles east of Hebbronville and has bassed the sand in which a showing was had in No. 1 Jones nearby.

Zapata County Wildcats

W. M. Baden of Winfield, Kans., has filed notice of intention to drill on Block 22 of the Villa Survey in Zapata County. Benedum & Trees are drilling at 1,970 feet in No. 1 Benavides in the Villa grant. Magnolia Petroleum Co.'s No. 1 Cuellar, in Survey 278, is drilling at 1,600 feet. It had a trace of oil in a sand at 1,352-64 feet. Rollin V. Hill is rigged up on No. 3 Martinez, in the Villa grant, and is waiting on casing before spudding. The Texas Company's No. 3 Jennings is rigging up. It is about a mile southwest of No. 2 Jennings, which showed considerable gas and a trace of oil but failed to make a well.

Duval County

Humble Oil & Refining Co. is underreaming from 2,850 feet in No. 6 Walsh with the bottom of the hole at 3,566 feet. No. 4, which has been producing ever since December 20 last, and is the only producer still in that territory, topped the sand at 3,623 feet. Humble has erected a derrick for No. 1 Becher in Survey 531, a couple of miles farther west. Magnolia Co.'s No. 1 Speer, in Survey 185, a half-mile northwest of the Humble's No. 4 Walsh, is drilling at 3,885 feet. Humble's No. 5 Schallert, in Survey 255, several miles northwest, is drilling at 1,598 feet. Simms Oil Co.'s No. 1 Schallert, in Survey 241, is drilling below 3,620 feet.

C. O. Maddox and Goodman have made a location in Duval County at Copita, near the Brooks County line. George M. Ball's No. 1 Roach, a few miles east of the Cole Gas Field, at 2,560 feet, has set casing for a test. O'Hern & Seacord's No. 1 Benavides, 5 miles south of the Cole Field in Survey 174, at 1,787 feet stopped to set some surface casing. Simms Oil Co., 5 miles north of the Cole Field, at 1,804 feet, is taking a core. This well is on the Dinn ranch in Survey 62, and a little to the east and south of No. 1, which at 1,750 feet was a gas well making nearly 6,000,000 feet.

In the northern part of Duval County, Humble's No. 1 Dowdy (fee) at 2,353 feet, bailed to within 200 feet of the bottom and water broke in that could not be lowered. Houston Oil Co., which took over No. 1 Beall of J. T. Graham and set casing for a test at 2,438 feet is standing.

Atascosa County

W. G. French is rigging up in the northeast corner of Atascosa County at Lemmberg, and should be spudded in within a few days on No. 1 Jaksik. Plateau Oil Co. is at 2,840 feet in No. 1 Tomlin, in the northwest corner of Atascosa County.

Brooks County

Ballard & Underwood, at 2,212 feet in No. 1 Lasater, a salt dome test in northeastern Brooks County, has the drill stem stuck.

Edwards County

X. K. Stout is at 2,800 feet in No. 2 Peterson in Edwards County, a few miles east of Rock Springs.

Frio County

Wiley Wyatt is drilling at approximately 500 feet in both No. 1 Barnhart and No. 2 Fain in Frio County, 5 miles east of Pearsall.

Fayette County

Page and others have made a few hundred feet in No. 1 Rosa Russek, a mile north of Schulenberg in Fayette County. Previously reported depth of 1,000 feet was in error.

Gonzales County

Bristol Oil & Gas Co. (Elmer Finch) has spudded in the test at Ottine, in northwestern Gonzales County. The test

is in the northwest corner of the A. Zumwalt Survey and on the R. M. Denman farm. Martin Oil & Development Co. has made a few hundred feet in No. 1 Preston in the southeastern part of the county. L. L. Jones is drilling at approximately 1,000 feet in No. 1 Lamkin, 2½ miles south of Waelder. Bost Brothers are preparing to move back over No. 2 Taylor in the south edge of the Waelder townsite which is standing at 700 feet.

LaSalle County

DeLange, Eiser Development Co.'s No. 1 Dobie (fee) in the southeastern corner of LaSalle County, is drilling at approximately 1,000 feet.

Live Oak County

Mid-Kansas Oil & Gas Co. is standing at 1,410 feet in No. 1 Drummond, at Fant City. Simmons Oil Co. has set casing at 1,050 feet in No. 3 Sartain, a few miles southwest of Three Rivers where previous tests have indicated there might be gas.

Medina County

Medina Syndicate (Southern Gas Co.) has spudded in No. 1 E. B. Chandler, 1,500 feet south of the Henderson & Holden No. 4 Adams, a gas well, and is drilling at 226 feet. Sprague and others have a showing of oil and gas at around 1,000 feet in No. 1 Redus, over a mile east of the Henderson & Holden gas wells and in Survey 92. Pat Armstrong has spudded in both his No. 1 King and No. 1 Lacey, north of Hondo a short distance. J. R. McCaldin is drilling at around 2,600 feet in No. 1 Thompson. Golden West has set casing at 698 feet in the Joseph Courand wildcat, a little southwest of Castroville. Alamo Drilling & Leasing Co. has broken through the hard rock that has delayed drilling and is now at 100 feet and in softer formation and will make better headway. Ina Oil Co., which has been fishing for a rock bit for three weeks in No. 1 Hoffman on Survey 535, got the hole clear late last week and Saturday started taking a core. Depth is 1,944 feet and it is about 32 feet into the Edwards lime. Ina Oil Co.'s No. 1 Finger, on Survey 746, a few miles farther west in Medina County, encountered salt water at 725 feet, and is setting 10-inch casing to shut the water off. North & South Oil Co., at 1,425 feet, is abandoning No. 1 Taylor, a few miles south of Hondo. The Edwards there tested dry.

McMullen County

Westmoreland Oil Co.'s No. 1 Franklin, in northern McMullen County, a few miles north of Tilden, the county seat, may deepen to 2,500 feet, the contract depth, before attempting to test at 2,230 feet where it has a showing of oil. After the contract is complied with it would attempt to plug back to the 2,230-foot sand and develop it unless something better should be found below. The well is pure wildcat, being in a part of the county where there has been very little drilling, and that many years ago.

Refugio County

Houston Gulf Gas Co. has probably lost its No. 1 Shelly, in the Refugio County Gas Field, on the coast above Corpus Christi. The well found a new gas sand at 2,050 feet and was completed but made so much gas that it cut the fittings off. Before new fittings could be put on and the well controlled the sand had cut the casing so badly that when a new valve was in place and closed, gas escaped outside the casing and the well cratered and is running wild. It is barely possible that by tunnelling down the well can be saved but it seems doubtful. It was the first well completed to that sand. Other wells are producing at 2,400 feet and a few at 1,600 feet.

Starr County

Ramsey-Maxey's No. 1 Kelsey, on Porcion No. 76, a little north of Rio Grande City, tested for a small well, probably 5 bbls., in the sand at 724 feet and has encountered another sand at 960 feet, in which it is taking a core.

ARTESIA, NEW MEXICO

(Continued from Page 44)

1,500 feet; Compton's No. 2 Mann Permit, Section 3-18-27, drilling at 2,025 feet; Cook-Ironside's No. 1, Section 10-20-29, pulling casing; Decum Development Co.'s No. 1 Vandagriff Permit, Section 5-17-28, running 5⅜-inch casing to 2,100 feet; Flynn-Welch-Yates' No. 47, Section 28-18-28, on production; No. 49, Section 3-18-28, drilling below 1,350 feet; No. 3 Dunn Permit, Section 10-18-28, drilling below 700 feet; Rehn and others' No. 1 Winans, Section 15-18-28, drilling below 1,425 feet; Hamilton Petroleum Co.'s No. 1 Billings, drilling below 900 feet to change from rotary to cable tools; Henderson-Dexter-Blair's No. 1, Section 9-19-28, drilling at 900 feet; Ohio Oil Co.'s No. 2 New States, Section 8-18-28, drilling below 2,700 feet; Ohio's No. 1, Section 12-17-31, validated hole; Phillips & Welch's No. 1, Section 35-17-28, drilling below 2,125 feet, 2,000,000 feet of gas at 2,050 feet; Swartz-Compton-Eaton's No. 1 Brainard Permit, Section 5-18-27, shut down at 2,002 feet; Sun Oil Co.'s No. 1, Section 21-25-30, drilling depth not known; Skelly Oil Co.'s No. 1 Lynch Permit, Section 22-17-31, drilling below 2,500 feet; Snowden-McSweeney's No. 2, Section 33-18-28, cleaning out after shot; Bruce Sullivan's No. 1, Section 1-18-31, setting 12½-inch casing at 520 feet; Twin Lakes Oil Co.'s No. 8, Section 28-18-28, cleaning out after shot; Merriweather and others' No. 1 Goodale, Section 19-18-29, drilling below 2,250 feet; Wooley-Jones' No. 1 Beeson Permit, Section 33-17-30, to set casing and drill deeper.

Chaves County

Colorado Gas & Fuel Co.'s No. 1, Section 16-8-27, shut down; Etz-DeVito and others' No. 1, Section 24-11-25, resetting casing; Gibson Oil Corp.'s No. 1 Forsyth, Section 8-11-23, drilling; Hall and others' No. 1, Section 8-14-24, drilling below 250 feet; Rogers and others' No. 1 Purcell Sloop Permit, Section 14-11-26, pumping; Sparrow & Drake's No. 1 Fahrlander, Section 11-6-27, moving in rotary; The Texas Company's No. 1 Dunken Dome, Section 29-17-18, drilling at 1,350 feet.

Lea County

Cap-Rock Oil & Gas Corp.'s No. 1, Section 11-16-32, drilling below 150 feet; Covert and others' No. 1, Section 15-21-33, drilling below 1,300 feet; Ingelfield and others' No. 1, Section 4-17-34, rigging up rotary; Maljamar Oil & Gas Corp.'s No. 1 Baish, Section 21-17-32, cleaning out bridge 45 feet off bottom, well making 300 bbls.; Ohio Oil Co.'s No. 1 Mitchell Permit, Section 18-17-32, and No. 1 Pearl Miller Permit, Section 35-17-32, ready to spud.

GULF COAST FIELDS

(Continued from Page 44)

& Refining Co.'s No. 68 Smith bailed salt water at 4,920 feet.

The Texas Company abandoned No. 8 Taylor at Boling at 4,400 feet and the Humble-Gulf joint No. 5 Hawes is bailing at 3,000 feet.

In the Hull Pool, the Humble Oil & Refining Co.'s No. 23 Guentry is heading 300 bbls. at 3,115 feet. Same company's No. 1 Lynn is bailing at 4,250 feet. The Mecom Oil Co.'s No. 9 Taylor was abandoned at 1,952 feet.

The Gulf Production Co. worked over No. 2 Smith at High Island and it is pumping 75 bbls.

In territory outside of the pools proper the Gulf Production Co. abandoned No. 12 Davis at Long Breach, Fort Bend County, at 2,750 feet. D. J. Harrison got salt water in No. 2 Schlender on the southwest side of the Dayton Dome in Liberty County.

In the Vinton Pool, the Vinton Petroleum Co.'s No. 21 Rescue is flowing 1,000 bbls. of fluid, 50 per cent oil, at 2,200 feet. Its No. 15 Harmony bailed dry at 2,300 feet. The Texas Company's No. 3 Vincent bailed dry at 2,300 feet. The Supreme Oil Co. abandoned No. 2 Gray at 2,500 feet, after working it over. The Gulf Refining Co.'s No. 42 G. N. G. is pumping 5 bbls. at 2,550 feet. Marrs McLean's No. 11 Gray is bailing at 2,100 feet.

In the Edgerly Pool, the Gulf Refining Co.'s No. 25 Bright-Penn is making 100 bbls. at 3,200 feet.

In the Jennings Pool, the Gulf Co.'s

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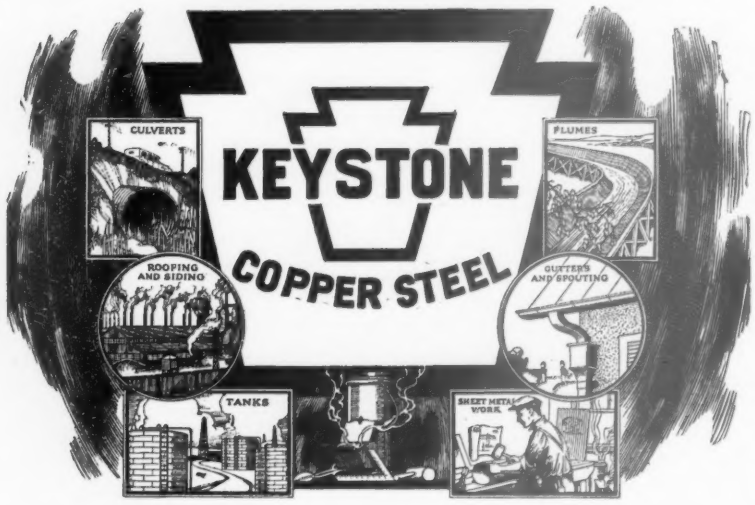

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No. 37 Arandale is pumping 75 bbls. at 1,900 feet.

The Vacuum-Gulf joint No. 7 Miller in the Lockport district will pump at 4,375 feet.

Late Spindletop

The Gulf Production Co.'s No. 1 Jack-Duff, 1,000 feet south of production is in a sand showing oil and gas around 3,156 feet. The Yount-Lee Oil Co. set 6⅝-inch casing in No. 8 Gladys on the west side at 3,360 feet and will drill into sand. Reference has been previously made to records in this review. Remarkably fast time is being made in drilling wells in the deeper area at Spindletop. The Rio Bravo Oil Co. completed one in eight days drilling time and the average is from 10 days to 2 weeks. No hard rock is found. The Rio Bravo Oil Co.'s No. 2 on the Southern Pacific right of way is still flowing 8,500 bbls., although it is 10 days old. The gravity is 29.4.

Drilling in the Pools

In the Batson Pool, Hardin County, The Texas Company's No. 2 LaJarza on the east side, is at 1,434 feet. The Gulf Production Co.'s No. 62 Choate is at 1,132 feet and No. 1 Cruse around 640 feet. The Houston Production Co.'s No. 1 Santa Fe is drilling at 2,934 feet and the East Batson Oil Co.'s No. 1 Counzelman is below 875 feet.

In the Saratoga Pool, the Rio Bravo Oil Co.'s No. 112-B is around 1,000 feet.

In the deep sand section at Sour Lake, Humphrey Corp.'s No. 1-B Bashara is preparing to test at 3,865 feet. No. 1 Oxford-Kelly is drilling at 3,500 feet. The Sun Oil Co.'s No. 1 Libbie is around 4,915 feet. The Orange Petroleum Co.'s No. 1 Merchant is at 3,975 feet. Gulf Production Co.'s No. 1 McLean is at 3,515 feet. Eunice and others' No. 1 Eunice is at 1,980 feet, with a derrick up for No. 2. Gordon and others' No. 1 Schaffers is drilling around 3,310 feet. On the north side The Texas Company's No. 303 fee is at 1,309 feet and the Lake View Oil Co.'s No. 49 Hardin is around 1,500 feet.

Harris County

At Pierce Junction, Gulf Production Co.'s No. 19 Taylor drilling at 1,875 feet. The Texas Exploration Co.'s No. 10 Dooley drilling at 1,980 feet. Bashara Oil Co.'s No. 1 Bender around 3,235 feet. Rio Bravo Oil Co.'s No. 3-P Settegast drilling at 2,710 feet and No. 3 P. F. Settegast at 1,890 feet.

Goose Creek Pool

In the Goose Creek Pool, the Gulf Production Co.'s No. 12 Chapman-Bryan is fishing at 4,400 feet. No. 25 Smith is drilling around 2,765 feet and No. 7 Wright below 4,900 feet. No. 34 Beaumont is at 2,890 feet and No. 6 Hirsch is drilling around 4,023 feet. The Humble Oil & Refining Co. is working over No. 26 Smith. On Galliard Peninsula, that company is working over Nos. 9, 10 and 12 and has a derrick up for No. 17. The Southern Exploration Co.'s No. 7 Freeman in the bay is drilling at 2,765 feet. M & B Oil Co.'s No. 4 Scorrgea is at 4,617 feet, northwest of production.

The Sun Oil Co. has started No. 34 River, on the north side of the Humble Pool.

Liberty County

In the Hull Pool, on the east side of the dome, the Republic Production-Houston Oil Co.'s No. 132 Dolbear is bailing at 2,660 feet. No. 133 is drilling at 2,655 feet and No. 135 is around 2,415 feet. A derrick is up for No. 136. To the southeast on the Phoenix, the Gulf Production Co.'s No. 70 is drilling around 3,010 feet and No. 71 at 3,180 feet with No. 72 below 765 feet. No. 10 Thomas is below 2,355 feet. Gulf Co.'s No. 18 Scarborough, on the north side, is at 3,455 feet and No. 18 Hannah fee, on the west side, is at 4,100 feet. The Texas Company's No. 1 Hannah is drilling at 3,233 feet and No. 1 Hannah fee is at 3,010 feet. A derrick is up for No. 1 Armelin. The Humble Oil & Refining Co.'s No. 1 Bevers is at 3,510 feet with a location for No. 2. A derrick is up for No. 22 Guedry. The Empire Gas & Fuel Co.'s No. 20 Barngrover is rigging and No. 21 is drilling at 2,235 feet. The Peer Oil Co.'s No. 4 Harrison is sidetracking at 2,700 feet.

In the South Liberty Pool, the Peer Oil Co. is wrking over No. 1 Harrison. The Premium Oil Co.'s No. 1 Mitchell is around 3,610 feet. The Humble Oil & Refining Co. is rigging No. 3 Welder in the west extension with a location for No. 4 and the Gulf Produtiocn Co. is rigging No. 1 Beckman.

The Old Colony Oil Co.'s No. 13 Liberty is drilling in the Dayton Pool.

Fort Bend and Brazoria Counties

The Hyde Production Co.'s No. 2 Masterson, on the northeast side at West Columbia, is rigging up. The Rycade Petroleum Corp. is drilling Nos. 9 and 10 Nash off the Nash Dome on the line of Fort Bend and Brazoria Counties.

The Gulf Co. is drilling No. 8 Moore, in the Orchard district, northwest of Rosenburg, Fort Bend County.

The Gulf Production Co.'s No. 7 Blakely, at Blue Ridge, is bailing at 3,700 feet. its No. 6 West-Schenck, on the south flank of the dome, is drilling around 2,200 feet. J. S. Abercrombie Oil Co.'s No. 2 West-Schenck is rigging.

In Other Pools

In the Boling Pool, on the northeast flank, the Sun Oil Co.'s No. 2 Farmer is at 1,455 feet and The Texas Company's No. 1 Farmer is around 1,800 feet. The Texas Company is rigging No. 10 Taylor and No. 1 Felder, on the northwest flank. In the shallow section on the dome, the Weed-Gayle Co.'s No. 3 Bey is around 300 feet and No. 6 Felts is around 345 feet. No. 1 Weytek is shut down at 450 feet, the usual depth at which the cap rock is found. Ingram and others' No. 1 Kostlenik is at 570 feet. No. 2 is around 235 feet. Vineyward and others' No. 1 Ueckert is rigging.

At High Island, the Gulf Co.'s No. 5 Smith, between the dome and the Gulf of Mexico, is around 4,815 feet. The Sun Oil Co.'s No. 8-C Cade is at 4,415 feet. A location has been made for No. 11 Cade. No. 9 Lockhart is drilling at 455 feet.

The Bennett Production Co. is drilling two tests and Barclay and Meadows one at Barber Hill, in Chambers County. These are on the north side of the dome, where production was developed recently by the Bennett Production Co.

At Markham, the Rycade Petroleum Corp.'s No. 2 Kountz, on the south side, is drilling around 3,210 feet. The Houston-Gulf Gas Co.'s No. 1 Kountz, 2 miles west of Markham, is drilling at 4,170 feet.

South Louisiana Pools

In the Vinton Pool, the Edgerly Petroleum Co.'s No. 10 Vincent is sidetracking at 3,655 feet and No. 11 is drilling at 765 feet. The Vinton Petroleum Co.'s No. 17 Vincent is drilling at 2,500 feet, with a location made for No. 56 Gray. The Gulf Refining Co.'s No. 5 Gray is at 1,455 feet. No. 2-A Gray is at 2,170 feet. A location has been made for No. 1 Sherry by Seiss & Ractcliffe.

In the Lockport district, the Vacuum-Gulf's joint No. 7 Miller will pump at 4,375 feet. No. 8 Miller is around 4,400 feet and No. 10 below 4,540 feet, with No. 11 Miller drilling at 3,815 feet. No. 3 Bordages is at 3,765 feet. The deepest hole in the pool, noted for its extreme depths, is No. 4 Lock-Moore, drilling around 5,550 feet. Locations have been made for Nos. 1 and 2 Bayou D'Inde.

In the Edgerly Pool, C. M. Crott's No. 14 Lilliard is at 544 feet. The Rex Petroleum Co.'s No. 3 Hunter is drilling around 3,400 feet. Drysdale-Savoy Oil Co. set liner in No. 2 Hill at 2,950 feet.

The Utropia Oil Co. is rigging No. 2 Clement in the Jennings Pool. The Union Sulphur Co.'s No. 11 Premer is drilling in Calcasieu Parish.

Coastal Wildcats

Some of the major companies are showing a disposition to go back over some of the old well-known saline domes on and around which considerable exploration work has been done in the past. An example is the Gulf Production Co. starting on the Perry land on the south side of the Stratton Ridge Dome, southwest of Angleton, Brazoria County. The dome is one of the largest in area in the coastal region and has been the scene

of much wildcatting work during the past 14 years. Probably 20 wells have been drilled on and around the uplift and some production recovered on the northwest flank. About four years ago the Sinclair Oil & Gas Co. drilled into cap rock on the southwest side and the prospect looked good for a well, but it bailed salt water.

Since the advent of the seismograph and torsional balance in the coastal country, wildcatting methods have changed. Companies employing the geophysical method of making explorations make it a point to acquire big blocks of acreage around the prospect, so that if anything is developed the company has practically all the available acreage tied up. This bars the lease speculator and the small operator.

As a consequence of this condition, the small operators and the lease speculators are turning to the known saline domes, of which there are many, and have been accumulating acreage around these, in the belief that some day development work will be resumed. A few of these old domes, where the salt area has been partially defined at least, are: Hockley, 25 miles northwest of Houston; Davis Hill, in the northern part of Liberty County; Barber Hill, Chambers County, 12 miles northeast of Goose Creek; Big Hill, Jefferson County; Shepherd Mott, Matagorda County; Bessie Heights, Orange County; north of Dayton, Liberty County.

In Angelina County, the Humble Oil & Refining Co. is drilling No. 1 Henderson and V. R. Hatcher No. 1 Graham. The Flanagan Drilling Co. is shut down north of Lufkin.

The Valley Oil Co.'s No. 1 Thompson, in Austin County, is at 1,280 feet.

The Roxana Petroleum Corp. has two new domes in the southwestern part of Brazoria County. One is on the Allen ranch and the other on the Clement State prison farm. No. 2 Clement will test a show of oil in cap rock at 2,410 feet. No. 2 Allen is drilling below 4,800 feet.

In Chambers County, the Roxana Petroleum Corp. is starting a test on State land at Moss Bluff on the line of Chambers and Liberty Counties. The Texas Company has a location for No. 3 Old River on the Wallisville road.

The Marland Oil Co.'s No. 1 Hartfield, near Needville, Fort Bend County, is at 780 feet. The Gulf Co. is rigging No. 14 Davis at Long Point, between Big Creek and Damon Mound.

In Harris County, Brain and others' No. 1, north of Spring, is below 1,800 feet. Bancroft and others' No. 1 Hanes, near Elena, is around 3,450 feet. The Kane Exploration Co.'s No. 1 Foster is at 1,865 feet and Kelly and others' No. 1 Lipper, near Aldine, is around 2,700 feet.

At Big Hill Dome, in Jefferson County, the Houston Oil Co.'s No. 3 Sun-Dyson is at 1,900 feet. Off the new Fannette Dome, Gulf Production Co.'s No. 2 Bordages is fishing at 3,860 feet. Barbee and others' No. 1 Garrick is at 2,225 feet.

The Sun Oil Co.'s No. 3 Masterson, near Felicia, Liberty County, is at 2,575 feet. Leland and others' No. 2 Groggan, north of Dayton, is idle at 350 feet.

In Montgomery County, Newton and others' No. 1 is around 2,800 feet. George Newman's No. 2 Pattison, Waller County, is at 1,100 feet. The Brownie Babbittee Oil Co.'s No. 1 Lake Shore Road, Orange County, is rigging.

Around the Hawkins Dome, in Matagorda County, the Gulf Co.'s No. 1 Parkinson is drilling below 3,180 feet and No. 5 Craig is starting to drill. At Van Vleck, the Humble Oil & Refining Co.'s No. 1 Robins is at 2,154 feet.

Humphrey Corp. and J. W. Rich's joint No. 1 Malone, 5 miles west of Wharton, Wharton County, is below 875 feet.

In Cameron Parish, Louisiana, the Pure Oil Co.'s No. 3 at Sweet Lake is drilling around 5,230 feet. The Sun-Humble Co.'s joint No. 1 in the Johnson Bayou section, is around 2,570 feet. Seven formation or prospecting tests were drilled there three years ago by the Johnson Bayou Prospecting Co. to depths from 1,000 to 1,110 feet, several of which showed gas.

N. LOUISIANA-ARKANSAS

(Continued from Page 52)

Surface casing was set at 180 feet at A. H. Stoltz's No. 1 Wait, Section 4-18-16, northwest of Kinard. South of Louann, Wingfield and associates' No. 1 Gallagher, Section 10-17-17, is drilling in sand rock at 2,565 feet. A rig is being moved in for the same operators' No. 1 McGough, Section 22-17-13, east of Dilolo. Jones & Murphy's No. 1 Union Saw Mill, Section 27-19-14, was dry and abandoned at 3,049 feet.

Ashley County

Pine Prairie Oil Co.'s No. 1 fee, Section 7-17-15, is shut down at 3,588 feet for rig repairs. Rhodes & Kirker are arranging to resume drilling at 2,554 feet at No. 1 Bledsoe, Section 20-15-7.

Bradley County

Magnolia Petroleum Co.'s No. 1 Arkansas Timber, Section 33-15-11, cored dry sand at 1,320 feet. McMurry and associates' No. 1 Southern, Section 7-15-11, is drilling at 1,275 feet. Wingfield and associates took over Yount and associates' No. 1 Southern, Section 2-16-12, and have moved in a rig for a test.

Calhoun County

Delmar Oil Co.'s No. 1 Guidor, Section 16-11-14, is drilling at 98 feet and plans to set 15½-inch at 100 feet. Southern Crude Oil Purchasing Co.'s No. 1 Calion Lumber, Section 1-16-14, was abandoned at 2,950 feet with the casing in the hole.

Cleveland County

Kingsland Oil Co.'s No. 1 Hall, Section 31-10-10, is drilling at 825 feet.

Lafayette County

Gulf Refining Co.'s efforts to pick up the Blossom pay northeast of Bradley were futile and No. 1-E Red River, Section 10-19-24, was dry and abandoned in hard blue shale at 2,843 feet. The Texas Company's No. 1 Colvin, Section 14-17-24, is drilling in hard lime at 2,333 feet.

Drew County

McClintock & Goodka's No. 1 Olga, Section 35-13-5, is shut down at 2,500 feet for fuel.

Hempstead County

Frank S. Myers' No. 2 Nichlos, Section 17-11-25w, is drilling in rock at 2,185 feet.

Jefferson County

Decem Oil Co.'s No. 1 Hinsley, Section 7-3-10, is drilling in rock at 2,525 feet.

Little River County

Greason and associates' No. 1 Waldrop, Section 4-13-31, is shut down at 1,289 feet. Mellick Oil Co.'s No. 1 Hawkins, Section 10-11-31, is drilling at 1,935 feet.

Miller County

Gulf Refining Co.'s No. 1 Dorsey, Section 27-17-26, is drilling in gumbo at 1,295 feet.

LOUISIANA WILDCATS

Bienville Parish

Surface casing was set at 200 feet and Woodley & Collins' No. 1 Thomas, Section 23-16-10, is drilling at 560 feet.

Bossier Parish

Doern and associates' No. 1 Bollinger, Section 9-22-11, is drilling in lime at 2,600 feet. Woodley & Collins' No. 1 L & A, Section 14-23-12, is flowing 700 bbls. of salt water and 10 bbls. of 42 gravity oil from 3,109 feet but inability to make the packer hold caused the operators to arrange to abandon. Same operators' No. 1 Antria, Section 4-21-11, is drilling at 108 feet.

Caldwell Parish

Southern Crude Oil Purchasing Co.'s No. 1 Caldwell, Section 35-14-5e, was abandoned at 492 feet. A rig is being moved in for Southern's No. 2 Caldwell, Section 1-13-5e.

Claiborne Parish

Gilliland Oil Co. and Ramsey's No. D-1 Taylor, Section 14-23-8, cored hard lime at 4,366 feet. Gulf's No. 1 Crichton, Section 35-19-8, is drilling in rock at 1,170 feet. Triangle Drilling Co.'s No. 1 Keen, Section 7-19-5, is drilling in anhydrites at 4,406 feet.

DeSoto Parish

Carl K. Dresser's No. 1 Williamson, Section 29-15-14, was dry at 3,160 feet, the casing was pulled and the test aban-

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doned. Graise & Hintze's No. 1 Tompkins, center NE, Section 27-14-13, is a location. Magnolia Petroleum Co.'s No. 1 Bond, Section 27-12-11, is drilling in rock at 3,631 feet. Peer Oil Corp.'s No. 1 Woolums, Section 23-13-13, is coring hard sand at 1,823 feet. Surface casing was set at 150 feet at Snapp and associates' No. 1 Flores, SE cor. SE SW, Section 27-11-11.

Grant Parish

Gulf Refining Co.'s No. 1 L. C. Swope, Section 17-9-1e, which revived interest in the Georgetown area when it was completed as an oil well, was officially completed as a 35-bbl natural well from sand at 1,597-1,600 feet. Two other Grant Parish wildcats were failures. Humble's No. A-9 L & A, Section 27-9-1w, was abandoned at 1,853 feet and Tunica Petroleum Co.'s No. 2 L & A Section 32-9-1e, was dry and abandoned at 1,772 feet.

Bradley & Cozart's No. 1 Holmes, Section 16-9-1e, is coring at 1,590 feet. Humble's No. A-10 L & A, Section 13-9-2w, is drilling at 60 feet. A derrick is up for Humble's No. A-13 L & A, 150 feet south and 320 feet west NE cor. Section 23-9-1w. Humble's No. A-1 Edenborn, Section 30-9-2w, is drilling in sandy shale at 1,310 feet. Tunica Petroleum Co.'s No. 5 L & A is drilling in shale at 1,903 feet. Location has been staked 1,020 feet west and 300 feet north SE NE, Section 11-8-2w, for Tunica's No. 8 L & A, and for No. 9 L & A, 1,020 feet south and 300 feet west NE cor. SE, Section 3-8-2w, and location made for Tunica's No. 10 L & A, 1,020 feet south and 1,020 feet east NW cor. Section 8-8-1w.

Jackson Parish

Charles A. Ferguson's No. 1 Martin, Section 5-15-1e, is drilling in shale and lignite at 1,645 feet. A derrick is up for El Dorado Chief Oil Co.'s No. 1 Jones, 1,220 feet south and 275 feet west NE SE, Section 3-14-4w. Grigsby & Co.'s No. 1 Adams, Section 22-17-4w, is a rig. A rig is being moved in for Raymond and associates' No. 1 Davis, Section 13-16-2e.

Lincoln Parish

Arkansas Fuel Oil Co.'s No. 1 Cooper, Section 3-20-4w, was dry and abandoned at 3,293 feet. Location was made by the Arkansas for No. 1 Lincoln Land Co., 300 feet south and 300 feet east NW cor. Section 30-18-3w. Buckley & Palmer's No. 1 Davis, Section 12-20-3w, is drilling at 2,079 feet.

Natchitoches Parish

Forrest, trustee's No. 1 Ayers, Section 3-13-7, was dry and abandoned at 2,465 feet. R. E. Davison and associates' No. 1 Williams, Section 31-8-5, is drilling at 454 feet. Forrest's No. 2 Ayers, 426 feet west and 315 feet north, center Section 3-13-7, is drilling at 500 feet. Weaver Brothers Lumber Co.'s No. 1 fee, 300 feet north and 200 feet east SW cor. NW, is drilling at 800 feet.

Rapides Parish

Minnesota Oil Corp.'s No. 1 Wettermark, Section 7-5-3w, is drilling at 250 feet. A rig is being moved in for F. Pacholik's No. 1 Voda, Section 12-4-1e.

Red River Parish

Alden Oil Co.'s No. 1 Powell, Section 13-11-10, is drilling at 650 feet.

Richland Parish

Gulf Refining Co.'s No. 1 Ches-Wyman Section 23-18-8e, is drilling in sand at 200 feet.

Sabine Parish

Toro Petroleum Co.'s No. 3 Drake, Section 19-4-11, was dry and abandoned at 1,606 feet. L. M. Emlet has resumed drilling at No. 7 H. L. Bowman, Section 14-7-14, and is drilling in rock at 1,412 feet. A derrick pattern is on location for Godcharex and associates' No. 1 Mills, NW SE, Section 12-4-13.

Spencer & Rhodes' No. 1 Somerset, Section 29-14-12, is a rig.

Tensas Parish

Allen Drilling Co.'s No. 1 Sanders, NE cor. SW NE, Section 21-13-2w, is a derrick pattern. Ohio Oil Co. is still trying to jerk the drilling stem from 1,556 feet where it stuck in No. 1 Edenborn, Section 4-12-1w. O'Neil & Schuman's No. 1 Albritton, Section 27-10-1e, failed to pick up sand and has been temporarily abandoned at 1,645 feet.

Winn Parish

Humble Oil & Refining Co.'s No. 12 L & A, Section 21-10-2w, was dry and abandoned at 1,534 feet.

LaSalle Parish

Humble's No. 2-A Louisiana Central, Section 22-11-3e, is drilling at 1,615 feet. Jena Oil Corp.'s No. 1 White Sulphur, Section 23-8-4e, set surface casing at 103 feet. The Texas Company's No. 1 Swope, Section 16-9-1e, is shut down at 785 feet for boiler repairs. Tunica Petroleum Co.'s No. 6 L & A, Section 22-9-2e, is drilling in gumbo at 1,912 feet. A derrick is up for Tunica's No. 7 L & A, 300 feet north and west SE cor. NW NW, Section 1-8-1e. Vacuum Oil Co.'s No. 1 Louisiana Central, Section 13-10-2e, is drilling at 1,200 feet.

CANADIAN FIELDS

(Continued from Page 54)

It is reported that arrangements are being made to finish the hole as a diamond drill test.

Great West Oil Co.'s No. 1, SE. Section 7-20-2w5, is at 3,412 feet in a limestone formation, after encountering a considerable show of oil around 3,408 feet. The 12½-inch casing, making the longest string in Canada, has been set at the bottom of the hole, which will resume drilling for 10-inch casing. The drillers expect to get the Madison limestone around 3,800 feet.

Advance Oil Co.'s No. 2, LSD 14, Section 20-19-2w5, has set the 15½-inch casing at 790 feet and resumed drilling for the 12½-inch. British Dominion Oil Co.'s No. 1, LSD 4, Section 5-20-2w5, has set the 15½-inch casing at 1,250 feet and resumed drilling. Calmont Oils, Ltd.' LSD 2, Section 1-20-3w5, is at 800 feet, and drilling.

New Black Diamond Oil Co.'s LSD 1, Section 3-20-3w5, is drilling around 400 feet and has encountered a few light showings of gas. Okalta Oils, Ltd.'s LSD 1, Section 1-20-3w5, is digging cellar and has derrick timbers on the ground and machinery on the way. W. S. Herron will supervise drilling operations.

Blew Over the Derrick

Dutch-Canadian Oil Co.'s LSD 14, Section 4-19-2w5, is cleaning out the old Record Oil Co. well preparatory to resume drilling at 4,327 feet. After some debris in the well had been drilled out, accumulated gas pressure blew water and oil over the top of the derrick.

Dallas Oil Co.'s No. 1, LSD 11, Section 20-19-2w5, is at 2,165 feet and drilling. The drill entered the Dakota formation at 1,935 feet. New McDougall-Segur Oil Co.'s LSD 14, Section 12-20-3w5, is at 1,500 feet and drilling. The 15½-inch casing was set at 992 feet. New Valley Oils, LSD 4, Section 6-21-2w5, is cementing the 20-inch casing at 250 feet. Cooper Nanton Oils, LSD 2, Section 7-20-2w5, is at 2,400 feet and drilling. The 12½-inch casing was set at 2,070 feet, and at 2,260 feet the drill struck a gray sandy shale with traces of gas.

Royalite Oil Co.'s No. 5, LSD 13, Section 7-20-2w5, is at 3,450 feet and drilling. Royalite's No. 6, LSD 16, Section 31-19-2w5, is drilling at 2,975 feet.

Dolomite Oils, Ltd., LSD 8, Section 1-20-3w5, has the cellar dug and is working on the derrick.

Anglo-Dutch Oils, Ltd., will drill a test in LSD 8, Section 11-20-3w5, midway between the No. 2 McLeod and Illinois-Alberta wells.

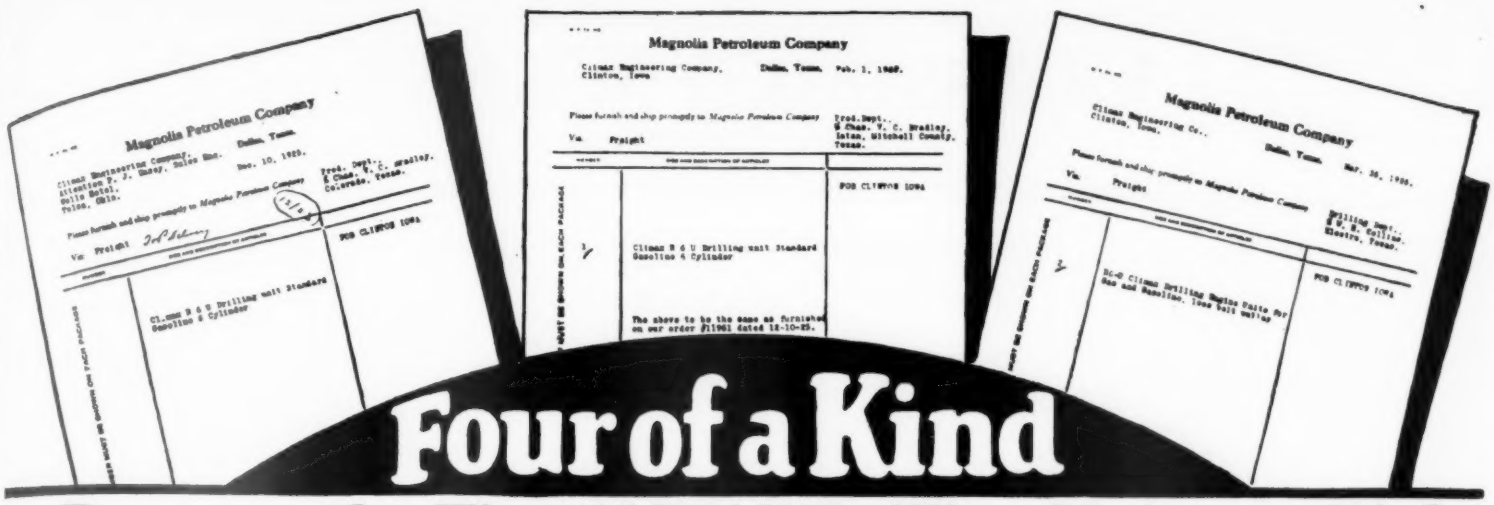
In the southern foothills, Imperial Oil-Rice Creek, Section 4-14-2w5, is at 4,550 feet, with the 6¼-inch casing lowered to a depth of 4,509 feet. The crew is drilling and underreaming to carry the casing down behind the tools.

In the Jumping Pound district, Imperial Oil-Bow River No. 1, LSD 15, Section 12-25-5w5, is at 3,320 feet and steadily drilling in the Kootenay formation.

Border Fields

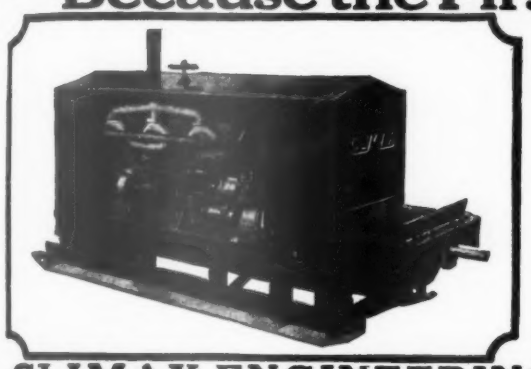
In the Border fields, Imperial Oil Erickson Coulee No. 1, LSD 13, Section

(Continued on Page 127)


Magnolia Petroleum Company
Climax Engineering Company,
Clinton, Iowa
Dallas, Texas. Feb. 1, 1926.
Please furnish and ship promptly to Magnolia Petroleum Company
Via Freight
Prod. Dept.,
W. Chas. V. C. Bradley,
Iatan, Mitchell County,
Texas.
MUST BE SHOWN ON EACH PACKAGE
1
Climax B & U Drilling unit Standard
Gasoline 4 Cylinder
F.O.B. CLIMAX IOWA
The above to be the same as furnished
on our order #11981 dated 12-10-25.

Four of a Kind

—Because the First CLIMAX Drilling Unit was Right



6-Cylinder, 6x7 in. Climax Engine, mounted on structural steel skid frame.

Magnolia Petroleum Co. of Dallas bought the first Climax outfit in December, 1925 —the second, February 1st, 1926, and the third and fourth outfits on March 26th, 1926. What better proof can we give of the satisfactory operation of—

CLIMAX

Cable Drilling Units

Write for Bulletin H

CLIMAX ENGINEERING CO., 32 W. 18th Avenue, CLINTON, IOWA

Coast Machinery Corp., 464-66 E. 3rd St., Los Angeles, Calif.
Coast Machinery Corp., 829 Folsom St., San Francisco, Calif.
Petroleum Electric Co., Tulsa, Okla.
Dunnigan Tool & Supply Co., Westbrook, Texas

Mid-Continent Office: **Wells Hotel, Tulsa, Okla.**

Also Sold By—
Sheehan & Co., 1516 Bassett Ave., El Paso, Texas
The Hendrie & Bolthoff Mfg. & Supply Co., 1621-39 17th St., Denver, Colo.

Mine & Smelter Supply Co., Salt Lake City, Utah
W. A. Browning Co., Commerce St. & Exposition Ave., Dallas, Texas
F. W. Gartner Co., 3315 McKinney Ave., Houston, Texas

A letter from you will bring a booklet

It will give you all the particulars of reducing gasoline treating costs 20% to 80%—it will explain how the MASTER MIXER HEAD can be utilized economically and efficiently in many operations and methods—if you cannot reach a solution to your problems from reading it—we will place our Research Department at your disposal.

MASTER MIXER HEAD

—an appliance of merit—a real boon to Refineries and Oil Fields—investigate its merits—it is sold with a positive guarantee of satisfaction—WRITE.

Petroleum Appliance Company

1419 West 8th St. **Los Angeles**

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

CLASSIFIED WANTS

CREATE AND BUILD BUSINESS

MAIL your advertisement now. It will be published next week. Cash with order.

LEASES—PRODUCTION

FOR SALE—Wildcat drilling blocks and small leases in Western Texas Counties. Also offset acreage to drilling wells in Callahan, Jones, Shackelford Counties, Texas. Also land owners royalty in Winkler County. Allen Buell, Jr., Grace Hotel, Abilene, Texas.

SHALLOW PRODUCTION

Would like to hear from parties wishing to invest in settled production, ten years old. Shallow wells in Allen County, Kentucky. Address Box No. 94, Scottsville, Ky.

SOUTHEAST NEW MEXICO

Can furnish practically proven leases in Artesia Field, Eddy County. Also other tracts in Eddy, Chaves and Lea Counties. Particulars on request.

H. T. ORCUTT
1114 Colcord Bldg., Oklahoma City, Okla.

FOR SALE—170 acre lease. Delaware Field, Nowata County, Oklahoma; 12 producing wells; the entire lease looks like producing territory; depth 750 feet; extra good equipment; lots of gas—no vacuum; a good air proposition. This is worth investigating. I am going to sell. Address Box 35 or Phone 423, Nowata, Okla.

HUMBLE-MOONSHINE HILL production; 110 bbls. net; 20 acres, 12 wells; 1,100-foot depth; 90 feet of sand; lease about third developed; power house complete; first-class equipment; $75,000, half cash. Address Box B-443, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—All or part of 150 acres of proven productive land in Osage, Wyoming. Land under fee title to 100 per cent or subject to ⅛ royalty. Land located in E½ of Section 13-46-64 and will stand closest inspection, a chance for someone to get into quick production with small investment. Producing sand at 1,350 feet, wells long lifed and average around 50 bbls. of high gravity crude on flush. Address L. M. Snow, 784 Bdwy., Denver, Colo., for particulars.

WE ARE DRILLING seven wells in northeast extension Panhandle fields and expect to open another enormous new oil area soon. I can deliver some 20 and 40-acre leases 2½ miles from these wells at $10 an acre. Good geology. Write for details at once.

E. R. LOVEWELL
Amarillo Hotel Amarillo, Texas

FOR SALE or lease—300 acres tested on all sides, Bartlesville sand. John McQuiston, Route 7, Independence, Kans.

WRITE for my state of Texas oil map free. Oil leases exclusively. Reference Mercantile Agencies.

C. W. WEBSTER
W. T. Waggoner Bldg.
Fort Worth, Tex.

TEN-YEAR oil leases. No rentals. Crockett County, Texas. Send for true map. Paul Konz, Box 291, Fort Worth, Tex.

HAVE BUYERS for flush or settled production in Oklahoma and north Texas. Vern R. Hartman, P. O. Box 442, Dallas, Tex.

AMARILLO PANHANDLE OIL FIELD

Underwriter Brainard Ranch oil and gas leases, 25,000 acres in Hutchinson County. Hutchinson County is the major producing area. New 5-year leases from 20 acres to 160 acres. Bought right can sell at reasonable price per acre. Write for map and prices. I have handled, as underwriter, over 60,000 acres in the field on which over 80 wells are now drilling or producing. Ed R. Mayer, Amarillo Hotel Bldg., P. O. Box 1186, Amarillo, Tex.

FOR SALE—Leases and settled production in Warren, Allen and Barren Counties, also drilling propositions in shallow territory. Warren and Allen Counties oil is now posted at $2.10 to $2.40 per bbl. and Barren County at $2.25. W. D. Harley, Bowling Green, Ky.

I HAVE LEASES, 160-acre tracts up, in Lipscomb and Hemphill Counties where the big play is now on at $2 to $3 per acre. New leases made direct from owner of land to you. Dr. W. R. German, Canadian, Texas.

LEASES—PRODUCTION

M. ELDER & COMPANY

Dealers in
Leases, Royalties and Productions,
Drilling Contracts, Wildcat Blocks.
Laredo District
HAMILTON HOTEL, LAREDO, TEX.

HAVE SEVERAL pieces of flush and settled production for sale in Oklahoma and Wichita Falls districts. Prices reasonable and terms can be arranged if necessary. P. O. Box 1144, Dallas, Tex.

PRODUCTION WANTED
IN
TEXAS, OKLAHOMA OR KANSAS

We are interested in the purchasing of good, settled production ranging from 50 to 500 bbls. net. Must be good, proven territory ranging from 800 to 2,000 feet in depth and room for more development.
Complete description, price and detailed information must accompany offerings and subject to 30-day investingation. We have the spot cash to deal with.

OHIO MID-CITIES CORPORATION
328 Press Building
Binghamton, New York

SOUTHEASTERN NEW MEXICO

10,000 acres state leases in ten townships of southern Lea County. Also drilling blocks in Chaves and Eddy Counties. Address W. A. Nicholas, Roswell, N. Mex.

THREE LOCATIONS FROM PRODUCTION

Forty-acre lease; wish first well drilled for interest on structure. W. K. Mann, 510 N. A. St., Arkansas City, Kans.

FOR SALE—Lease or drilling contract on 450 acres in Section 1, T. 3n, R. 5w, Grady County, Oklahoma. Make me an offer. J. Mazur, 1831 Evergreen Ave., Chicago, Ill.

ROYALTIES—PRODUCTION

PRODUCING ROYALTIES WANTED
IN
OKLAHOMA OR KANSAS

Settled production preferred. Complete description, price and detailed information must accompany offering.
The purchase or consolidation of other royalty companies would be considered up to $1,000,000. But must stand rigid investigation. We have spot cash to deal with.

OHIO MID-CITIES CORPORATION
328 Press Building
Binghamton, New York.

STEPHENS COUNTY, OKLAHOMA
Wildcat Royalty

4,000 acres scattered, one-fourth royalty, at $4 per acre.
Clyde Miller Duncan, Oklahoma

BROKERS OPPORTUNITY

Settled producing royalties are easy to sell, because if you have the right field connection your clients will very probably make big money. The advertiser is a royalty dealer and has brokers in various states cleaning up selling producing royalties to an established clientele who are buying more heavily all the time, because they cash in some of their buys at over 100 per cent profit. I have an attractive proposition for you—write for it. State your experience in oil financing, and the character of your clientele. Box B-446, The Oil and Gas Journal, Tulsa, Okla.

ROYALTIES—PRODUCTION

ROYALTIES—Can secure Arkansas royalties on structure in line with production where there is most certain to be much activity in the near future. Get in before the rush. Correspondence invited. Harry Spooner, Stephens, Ark.

WANT producing royalties in Arkansas and Louisiana. Give all details. James H. Dugan, Randolph Hotel, El Dorado, Ark

HERE'S A BARGAIN IN SETTLED ROYALTY

Have a royalty in one of Texas' best fields. It is making more oil now than three months ago, and present runs are at the rate of about 4 per cent per month on purchase price, $3,000. Will sell as small as $1,000-fraction. So confident this royalty that will give six months guaranty covering 85 per cent of purchase price. Write for details.

E. D. McMAHON
418 Cotton Exchg. Bldg., Ft. Worth, Tex.

OPPORTUNITY TO BIG BUYERS IN PRODUCING ROYALTIES

Have a spread of royalties under 300 wells mostly settled and in such real fields as Powell, Mexia, Haynesville, Burkburnett, etc. Many tracts have splendid deep sand possibilities. Present oil runs at rate of over $1,600 a month. Attractive price and terms. Write on your letter head. Owner, Box 1490, Ft. Worth, Texas

FARMS, LEASES AND ROYALTIES in Anderson County, Texas. Oil will be found in this county, and now is the time to buy a farm, lease or royalty, before it is brought in. Write for information. J. E. Bennett, Elkhart, Tex.

ROYALTIES WANTED—Principals have $500,000 to invest in best class producing royalties. Complete description and price must accompany offerings. Settled production preferred. P. O. Box 271, Wichita, Kans.

WANTED—Producing royalties Oklahoma and Kansas. Give full details. P. O. Box 502, Independence, Kans.

TEXAS PANHANDLE

Royalties in large or small units to suit any size buyer in fastest growing and most rapid developing oil field in middle west. Write for list of offerings. B. O. Taylor, 306 Blackburn Bldg., Amarillo, Tex.

FOR SALE—EQUIPMENT

FOR SALE—STORAGE TANKS

Seven steel horiz. 12-14,000 Gal. Chgo. Dely. A. V. Konsberg, 312 S. Clark St., Chicago.

MANUFACTURING MACHINISTS

Screw machine products, sucker-rod fittings, swivels—anything made from bar stock. Heat treating of metals. Contract manufacturing. Send B/P or samples for quotations. Accurate work, prompt delivery.

TURNER-WARNER SCREW CO.
1226-34 Lydia Avenue
Kansas City, Mo.

FOR SALE—Hart-Parr tractor, 30, 60 H. P., good condition; price reasonable. A. G. Gilliat, Boerne, Tex.

FOR SALE—One No. 27 Star Machine, boiler and tools; machine just rebuilt; has not been run. Will make a good price. Address J. S. Winkler, Chanute, Kans.

FOR SALE—Four second-hand oil well pump jacks; will sell cheap, make us offer. Stroud Water & Light Dept., Stroud, Okla.

USED LINE PIPE FOR SALE
50,000 feet 3-inch
75,000 feet 4-inch
50,000 feet 6-inch

Two miles 60-pound first-quality relaying rails.
For immediate shipment from our Texas yards.

KEYSTONE PIPE & SUPPLY CO.
315 W. T. Waggoner Bldg.
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We buy and sell
Casing, Line Pipe and Supplies.
Let us figure with you.
LEE MORRISON SUPPLY CO.
Bartlesville, Oklahoma.

FOR SALE—EQUIPMENT

CASING FOR SALE

140 feet 16-inch, 65-pound.
1,100 feet 12½-inch, 50-pound.
1,450 feet 10-inch, 32-pound.
1,500 feet 8¼-inch, 24-pound.
2,000 feet 6⅝-inch, 17-pound.
2,300 feet, 5⅜-inch, 17-pound.

All in good shape, used in one well. Will sell this pipe F. O. B. car.

MID-EGYPT GAS & OIL CO.
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Worthy of your confidence. General machine work. 1416 Walnut, Kansas City, Mo. Phone Harrison 7660.

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850 Eighth St., San Francisco, Calif.

FOR SALE—Two No. 19 and 1 No. 25 Armstrong and 1 No. 38 Star drilling machines with complete sets of tools. Rigs are in good running condition. W. P. Harley, Bowling Green, Ky.

PIPE FOR SALE

1-in. to 12in. Also complete drilling rigs. We are also in the market for pipe of any size or quantity.

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2001 Texas Ave., Shreveport, La.

TWO 250-horsepower Foos Gas Engines; four 75-horsepower G. E. motors; one 200-horsepower Westinghouse motor, 3-phase, 60-cycle, 2,300-volt; one 78x18 boiler and stack, steel casing, 140-pound pressure; one 14-x14 Chuse Steam Engine; one 8-ply rubber belt, 16-inch; all above equipment in new condition. P. O. Box 21, Dallas, Tex.

FOR SALE

1—De LaVergne 65-h.p. Type D.H. Oil Engine.
1—Gould Centrifugal Pump, 1750 G.P.M.
8—14 ft. by 30 ft. fire stills, never been fired.
4—18 ft. by 72 in. 150-h.p. Horizontal R.T. Boilers.
2—De La Val Centrifugal Separators.

Box B 418, The Oil and Gas Journal, Tulsa, Okla.

6—72 in. by 18 ft. 150-h.p. Boilers, clean and all reflued and in splendid condition.
1—5-ton Monarch Caterpiller tractor, nearly new.
1—70-h.p. 2-cylinder Bruce-MacBeth Gas Engine, little used.

AJAX GENERATOR & SUPPLY CO.
708 Ave. F., Burkburnett, Tex.

GASOLINE PROSPECTING MACHINE FOR SALE

Consists of 45 h.p. gasoline motor, Winch and Friction Clutches used on White 5-ton trucks; American Well Works Rotary; Goulds Triplex Power Pump for Slush; Gould's Water Pump; 1,100 feet 2½" 10-pound interior upset end drill stem; 2½" Kelly Joint; Two ½" drilling cables; 3" Swivel; complete tools and spare parts for operating and repairing in drilling wildcats; camp outfit. This machine is constructed in four units easily assembled and convenient for moving in most difficult and otherwise inaccessible territory, the heaviest unit weighs about 2,500 pounds. It has drilled seven 5¾" prospecting holes in swamps to depth between 1,004 to 1,113 feet. It can be inspected in storehouse at Johnson's Bayou, La. Apply to George J. McManus Cot on Hotel, Houston, Tex.

ONE Ingersoll-Rand double stage air compressor with intercooler. High pressure cylinder 5¼" by 12". Low pressure cylinder 10½" by 12". One 80-h.p. Otto (natural) gas engine. One 60-h.p. Otto (natural) gas eagine. This machinery is new and can be bought for 50 cents on the dollar, less freight. K. C. M. Co., Box 212, Newton, Kansas.

NEW AND SECOND-HAND Line pipe and casing; large complete stock; all sizes; reduced prices. Complete rotary drilling rigs for sale or rent with option to buy and get credit for rentals. Texas Supply Company, Box 1777, Houston, Texas.

35 CENTS a line first insertion; 25c a line each additional insertion. Cash in advance.

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MAIL your advertisement now. It will be published next week. Cash with order.

FOR SALE—EQUIPMENT

FOR SALE

Seven DeLaval Centrifugal Wax Separators No. 600, 7,000 revolutions per minute. Capacity: 180 gallons each per hour. Crocker & Wheeler motors, 2 H. P. each. These machines absolutely as good as new. Have only been used short time. Price $18,000. Either cash or liberal terms. Address Box 1929, Tulsa, Okla.

FOR SALE—REFINERIES

FOR SALE—Refinery. The refinery of the Great Southern Refining Company, at Pryse, Ky., consisting of a skimming plant, two Dubbs cracking units, pipe lines, 152 tank cars, 15 bulk stations; other refinery and sales equipment and all the assets of the said company are for sale.

An offer of $300,000 cash has been received from a responsible company agreeing to assume all liabilities.

Any better offer from financially responsible parties who will agree to assume the company's liabilities, submitted before September 1, 1926, will be considered at a meeting of the board of director on September 1, 1926. Address the Great Southern Refining Company, Lexington, Ky.

A PRACTICALLY NEW

SKIMMING PLANT

Operated for a period of four months, actual capacity 3,000 bbls. daily, located in northwest central Texas, in excellent condition, including tankage, loading rack and complete in every respect. Can be purchased, including the land upon which the plant is located, for an amount less than the salvage value of the materials in the plant.

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A BARGAIN—2,000-bbl. refinery in fine condition at important railroad center in Missouri Valley. Complete with land, building, machine shop, ample tankage, one Cross unit, Foster pipe still, crude and steam stills, containers, treaters, 5 boilers, loading racks, etc. Might sell equipment. Omaha Trust Company, Omaha, Nebraska.

EQUIPMENT WANTED

WAX PRESS WANTED

48" diameter, equipped with ½" spacing rings, blankets and plates complete. Give detailed specifications, stating length of press over all and length of ram. Box B-445, The Oil and Gas Journal, Tulsa, Okla.

WE WILL pay cash for a string of cable tools, also a couple of Stars. Must be priced right and in strictly first-class condition. Address Box B-442, The Oil and Gas Journal, Tulsa, Okla.

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DEPENDABLE
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Results sure, swift, economical. Employ the One Great Plan—the plan that gets money. Avoid abortive "mail order" and "phony" broker schemes. Describe proposition. Hansel Financing Specialists, 212-GE Earlham St., Pittsburgh, Pa.

DO YOU NEED MONEY for organizing or financing oil or mining deals? Write 117 E. 10th, Oklahoma City, Okla.

POSITION WANTED

CONSTRUCTION ENGINEER with university education and ten years experience as superintendent of construction and operation of oil refinery work including pipe still cracking plants and lubricating plant construction. Desires position in foreign field. Box B-444, The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED as oil field scout or salesman. Have had experience in both lines. Wide acquaintance. Age 32. Best references furnished. Please write Box B-440, The Oil and Gas Journal, Tulsa, Okla.

MECHANICAL ENGINEER, qualified by 12 years steam power and cracking plant experience, desires refinery connection in engineering and operating capacity. Particularly familiar with the development, construction and operation of the Dubbs Process in detail. Box B-390, The Oil and Gas Journal, Tulsa, Okla.

LEASE FOREMAN with eight years' experience desires connection with reliable company or individual. Have been connected with the oil business 20 years. Good references. Box B-430, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED land and lease man, either office or field, desires position. Box B-420, The Oil and Gas Journal, Tulsa, Okla.

OIL EXECUTIVE — Thoroughly familiar with all branches of the business, desires connection with reliable company. Have specialized in refining and distribution. Services available after August 15. Box B-416, The Oil and Gas Journal, Tulsa, Okla.

POSITION WANTED in refinery or field, 12 years' experience in refinery, 5 years as assistant superintendent, 3 years field experience. Would consider foreign position. Box B-422, The Oil and Gas Journal, Tulsa, Okla.

OPEN for position doing geological work, making oil and gas surveys, superintendent drilling inspecting properties. Best of reference. Years of experience. Box B-404, The Oil and Gas Journal, Tulsa, Okla.

HELP WANTED

STEAM SPECIALTY SALESMAN

Wanted to represent us in open territory. Good commissions.

FRANCE PACKING CO.
6510 Tacony St., Philadelphia, Pa.

WANTED—Draftsman with refinery experience. State age, education, date available, etc. Lion Oil Refining Co., El Dorado, Ark.

WANTED

HAVE 340-acre lease, Oklahoma. Need capital to drill 200 feet deeper. Production certain. Attractive proposition to parties interested. A. McGarry, 321 N. Sixth St., Muskogee, Okla.

WANTED, HIGH GRADE OIL PROPOSITION TO FINANCE by party who brought out Wall Street's greatest success. J. Myron Murphy, 50 Broad St., New York City.

WANTED—Someone who is willing to invest between $8,000 and $10,000 in a proven lease. P. O. Box 653, Lake Charles, La.

FOR SALE—MAPS

OIL DEVELOPMENT county maps; any county in Oklahoma or Panhandle of Texas, 50 cents each. Lindsay Map Co. Scott Thompson Bldg., Oklahoma City, Okla.

MAP of Texas Panhandle Oil Fields, showing contours drawn on salt, surface elevations, surface formations, and some speculative hypotheses as to new producing areas. Price $3. E. R. Lovewell, Amarillo Hotel, Amarillo, Texas.

SOUTHEASTERN NEW MEXICO
MAPS
Geological, Ownership and Sectional
Complete and Authentic
Write for folder.
M. H. HUNTER CO.
Roswell, New Mexico

MOTION PHOTOGRAPHY

SHOW your wells and machinery in motion pictures, others are doing it. The equivalent of each 1,000-foot standard film now costs you only $24 finished. Charley High, P. O. Box 1071, Studio 2819 E. Third, Phone 3-9598, Tulsa, Okla.

INCORPORATIONS

DELAWARE incorporators. Charters fees small, forms. Charles G. Guyer, 901 Orange St., Wilmington, Del.

FOR SALE—DOGS

I AM entering college and must sell my fine young police dog. Box 81, Rotan, Tex.

SALE—Pair unrelated white collies, 5 months old; Jefferson bred dogs. Write R. B. Pattee, Caldwell, Kan.

BUSINESS OPPORTUNITY

REFRACTIVE INDEX LIQUIDS

Liquids of known refractive index for use with the microscope in examination and identification of sediments. Now in use by the major oil companies in the United States and abroad. For particulars address:

A. C. HAWKINS
40 Nunda Blvd. Rochester, N. Y.

CAPITAL—An experienced, dependable broker with following will give personal attention to financing of worthwhile proposition. B. W., 810 Broad St., Newark, N. J.

WILL SELL or trade part or all in the largest second-hand pipe and supply house in north Texas. Will trade for farm or ranch land or property. This is a big money making business and volume can be greatly increased. Address Box B-441, The Oil and Gas Journal, Tulsa, Okla.

MINES—Have large copper deposits with gold, silver values, will turn over to one who can raise money to develop same. Oscar Long, 56 East Hoover, Phoenix, Ariz.

NAMES, CUTS $1.50 Art-Photos 4 $1.00. Addressing. G.P.O. Box 471, New York.

HAVE CAPITAL to invest in prospecting for new shallow oil field. Submit proposition with full details. P. O. Box 1303, Shreveport, La.

GEOLOGISTS of national reputation have completed examination and made exhaustive reports on large area in the San Joaquin Valley, which is now being leased. Will give responsible oil operators, ready to begin operations, large acreage. Address P. O. Box 98, Station C, Los Angeles, Calif.

ADVERTISING RATES

	1 Time	2 Times	3 Times	1 Mo.
3 lines	1.05	1.80	2.55	3.30
4 lines	1.40	2.40	3.40	4.40
5 lines	1.75	3.00	4.25	5.50
6 lines	2.10	3.60	5.10	6.60
7 lines	2.45	4.20	5.95	7.70
8 lines	2.80	4.80	6.80	8.80
9 lines	3.15	5.40	7.65	9.90
10 lines	3.50	6.00	8.50	11.00

(Six words usually make a line.)

Compute white space at the above rates. Mail your advertisement to

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

EVERY MAN his own geologist by my Geo-Physical method. Particulars 969-B Union Trust Bldg., Pittsburgh, Pa.

NEW GAS SECTION in northwestern Pennsylvania; shallow drilling; gas at 35 cents per M.; large area proven out; pipeline extensions made wells connected. Recommended the drilling of present wells. Have completed a geological report. Address V. A. Billstone, Jamestown, N. Y.

BUSINESS OPPORTUNITY

SHALLOW drilling proposition and close up leases in Brown County. Frank Poorman, 3215½ Ross Ave., Dallas, Tex.

WILDCATTERS ATTENTION

Will exchange 10,000 acres oil and gas leases on first class geological structure in Polk County, Wisconsin, for test well; natural gas seepage; shallow drilling. George Laskowske, Turtle Lake, Wis.

DRILLING PROPOSITIONS in Ohio and Warren Counties, Kentucky; 1,000 to 3,000 acres for the drilling of one well. R. E. Cope, Bowling Green, Ky.

FAMOUS PANHANDLE—When you want information reliable and confidential, a special report covering individual cases, enclose $1. Better Business Association, Amarillo Bldg., Amarillo, Texas.

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July Gasoline Sales Gain 16 Per Cent

Hot Nights Offset Rainy Days and Motorists in Chicago Territory Keep Demand Up. Market Generally Firm

By John B. Waldo

CHICAGO, Aug. 7.—This city, the nearby states and much of the Northwest have had a great variety of weather conditions during the past week. We have had days of rain followed by days of great heat and humidity. The general effect has been about balanced so far as motor driving is concerned. The days when rain kept the motorists off the roads have been more than made good by night driving which has been very greatly indulged in by all motorists in this city and probably elsewhere. The largest companies report that their July business showed gains above last year of from 16 to 18 per cent.

The subject of better gasoline is being renewed by the announcement of the Sinclair "H. C." gasoline in this territory and moves by other refiners along the same line. There are some distributors who seem worried regarding the effect on their business of the offerings of what is claimed to be a better gasoline than they sell. When the price is 3 cents a gallon higher as in the case of the Standard's "Sol-ite" or Sinclair's "H. C." brands it does not hurt so much. Station attendants state that there is some grumbling by motorists at the number of grades of gasoline that are offered and they are inclined to argue that one grade and that a good one will have to be the final summing up of the present condition.

Demand Continues Good

The demand for gasoline in this market while large has not been quite as large as was expected. This is due in some cases to the rains. But there has been at all times a good demand and at the close of the week there was more buying than at the opening. Jobbers seem to be still drawing against stocks or orders that were placed late in July for August delivery. Travelers who have been out in the territory state that many of the jobbers have gasoline bought for August delivery at 11¼ cents and that some state that their price was 11 cents. This was not all Navy but some of it 56-58 with either a 437 or a 450 endpoint. There was a strong demand for these gravities during the latter part of July when the price of Navy was advanced by refiners.

Some claim that the jobbers are holding back from buying and drawing on stocks in a considerable number of instances because they anticipate a tankwagon decline and that jobbers who have contracts have directed that the entire August allottment due them be shipped August 31.

The market today is firm at 11½ cents. There are few, if any, who are trying for the 11¾-cent price and just about as few who have sold at less than 11½ cents for the Navy grade. Moderate, very moderate quantities have been reported as purchasable at 11¼ cents to the trade but beyond naming one small plant in the Mid Continent Field no one is able or willing to name the seller at less than 11¼ cents. There may have been some sales made very early in the week when it was wet and cold. There have been some offerings of objectionable gasoline at less than the market but for strictly Navy gasoline that will pass the tests for that product, there seems to be no reason why a seller should offer his product at less than the market of 11½ cents. The higher gravities are very quiet and prices no higher at least than a week ago. Natural gasoline is reported to be firm and in better demand.

Kerosene has been dull and the price range has declined somewhat although the market is not really weak perhaps owing to the condition of many refiners who are sold up at least they have no kerosene to offer. Some of these refiners have their own distribution to care for and they are shipping to their own stations to fill the depleted tanks as they anticipate a further demand somewhat later in the season in addition to the small consumption that is always apparent. The market is at present 7¾ to 8 cents and it may hold at around this figure if the desire to sell does not become too strong. Much depends on the quickness with which refiners sensed the decrease in the demand from the jobbers and reduced their runs accordingly.

Distillates Active

Distillates have been rather active. Jobbers and distributors to local industries have been seeking to make the best deals possible and many have covered their requirements in part for the coming season. Several refiners report that they have booked all the early business that they care to, some claiming that they are practically sold up for the season. The Roxana Corp. states it is about through making contracts as it has booked a large volume of business. It has withdrawn its early prices and is now contracting, if at all, on a basis stated to be 5½ cents for its 38-40 dark amber with a flash of 175 degrees. The spot market is firm and sales are being made of 38-40 for immediate shipment at around 5¼ cents. The market is quoted at 5¼ to 5½ cents but jobbers state that they have been able to pick up some cars of good oil at slightly less. There is less talk that there will be no furnace fuel but there is also less choice given the buyer as to the kind of oil if the quantity is at all large. A car or a few cars can be had of almost any grade at the market price but there is little straw distillate or prime white distillate as compared with the amber distillate. Refiners are prepared, however, to give the distillate the essential qualities while the trade realizes the little importance of light colors except in the minds of consumers who are accustomed to that kind of a furnace oil.

Gas Oil Hard to Buy

Gas oil is rather hard to buy, at least at the prices the buyers expect to pay for it. What oil is available in any quantity is the darker grades while the light oils that are the kind wanted command a premium of an eighth to a quarter cent. There is only a small industrial consumption now but some of the industrial buyers are filling their tanks as they see the opportunity. These as a rule are not the larger consumers but those whom a tank will last for a considerable period. Gas companies are also buying the dark oil, some of them placing sizable orders. The firmness of the market is not so much the large demand as the small offerings and the difficulty of securing the grades that have been used previously.

Fuel Oil Market Strong

Fuel oils experienced a sort of flurry early in the week owing to the action of refiners in marking up their quotations, although the advances were not held in all cases. The market has quieted down but is still strong. The 24-26 gravity is held at $1.30 to $1.35 and buyers are paying the price. A leading seller remarked that it was less difficult now to get the present prices than it was earlier in the spring to sell at the prices then ruling. One of his regular trade had just ordered at $1.35 and merely remarked that prices were high as he told the seller to book the order. Last May the same buyer absolutely refused to pay $1.17½ at first for the same amount of the same grade of oil but finally did buy at that price. Apparently the buyers are finding out that the market has strength. There is another side to the buyers' view and that is that in May the industries were about to enter on their summer months of reduced production and there was some uncertainty as to the crops which play such an important part in the outlook of most western and Middle West industries. Today the outlook is favorable to a good steady demand for the majority of the industries especially in the West and the manufacturers are preparing for an active fall and winter season. The present consumption is just about normal for the season of the year.

Lubs in Demand

Lubricating oils are being consumed extensively, chiefly the motor grades. These continue to be scarce and leading refiners are buying to meet their own needs from other refiners and there is no abundance of either neutrals or bright stocks available of high quality from Oklahoma crude. Some Texas oils have been offered at a little less than the Oklahoma product and some claim are equally satisfactory although the general opinion is not as favorable to the Texas product. The export demand is not active and the industrial demand is only seasonable.

No Tankwagon Changes

There has been no general change in tankwagon prices over the territory of the Standard Oil Co. (Indiana) and the statement is made in a general way that there is no probability of a change while the consumers are using as much gasoline as at present and oil distributors are doing the best business that they have ever done. There is more or less local price cutting at widely separated points in the territory and the fact that these localities are so widely separated shows that it is due to local conditions.

DEFINITE IMPROVEMENT IN EAST; DEMAND ABOVE EXPECTATIONS

By N. O. Fanning
Washington Bureau, The Oil and Gas Journal

NEW YORK, Aug. 6.—The oil markets in the East showed a definite improvement during the past week. There have been three weeks of extremely warm weather, which has been duly reflected in increased gasoline and lubricating oil consumption. Every indication points to continued strength in these two products.

There have been no important price changes, so far as the tankwagon market is concerned. Nevertheless, the fact must be admitted that quotations have held up unusually well, and the statistical position is much better at present than one or two months ago, when consumption was below normal for the period. Refiners are now feeling the maximum summer demand, and it is said to be even above expectations.

In addition, kerosene, gas oil and fuel oil are all strong. Refinery gasoline at coastal plants is being held for around 14½ cents, with little offered; kerosene has been advanced another half cent. Although no changes have been experienced in gas oil or fuel oil, the tone of these products is strong.

Reports of a gasoline "price war" in the Albany, N. Y., district, is in line with usual events at this time of year. The retail price at some stations is as low as 19 cents a gallon, but the average is around 20 cents, a drop of more than 2 cents from the spring prices. The nominal tankwagon price is 21 cents, which would mean a retail price of at least 24 cents.

In Troy and Watervleit, N. Y., for several weeks there has been a price-cutting campaign, with prices dropping to 17 cents a gallon. Otsego County apparently holds the record, according to reports emanating from Albany, for the season's sharpest decline. Gasoline in Oneonta and some other districts in the vicinity is selling for 13 cents, retail.

Refiners in the New York district attribute the price-war to competition, and state the belief that it will prove to be a temporary, local condition.

Strength of Kerosene

With kerosene, gas oil and fuel oil exhibiting a strong tone, marketers cannot see a chance of a weak gasoline market. The recent strength in kerosene came at a time when many factors had expected weakness. It is attributed to many causes, all combining to increase consumption or to decrease the available supply for consumption. They include an unusually good domestic demand for tractors and a good export demand. In addition, there is the increased use in home oil burners. In fact, some owners complain of being unable to get fuel at reasonable cost for their burners. Affecting materially the supply of kerosene is the use of this fraction in cracking operations.

N. Y. Transportation Costs

There has been considerable question in the minds of many marketers who are not familiar with conditions in New York as to the reason for maintaining higher quotations in New York, east of the Hudson River, than those prevalent in New Jersey, just west of the Hudson. The writer, in an article some time ago, made an analysis of this situation with respect to gasoline.

A case has come up which indicates the importance of the cost of transporting petroleum products across the Hudson with relation to the ultimate cost of these products to the consumer. This is with respect to paraffin wax. The Asiatic Petroleum Co. filed a claim with the Erie Railroad Co. for a refund of the lighterage charge on a shipment of 80 bags of paraffin wax from Weehawken, N. J., to Pier 7, East River, New York City, for delivery to one of the Asiatic company's customers. The customer is located in this city. The 80 bags formed part of a carload shipment enjoying the storage in transit privileges.

The Asiatic Petroleum Co. charges that the bill for costs attending the lighterage was calculated at a rate of 46½ cents per 100 pounds, the basis being the double and third class rate of 21½ cents plus lighterage charge of 3½ cents per 100 pounds. The Asiatic company declares the railroad should assess lighterage charge for less than carload shipments involving local deliveries.

The Asiatic company also anticipates filing additional claims for refund of lighterage charges assessed on shipments that have been tendered for delivery by the railroad company within the past three years. This is possible because the Interstate Commerce Commission has decreed, since the Transportation Act of 1920 became effective, three years as

the time limitation for presentment of claims of this character.

The Export Market

The oil export market continued strong during the past week. An advance in case kerosene for export was one of the features, standard white being raised one-fourth of a cent and water white one-half cent a gallon. Bulk shipments to Europe were rather heavy, involving 2,310,730 gallons of gasoline, 2,099,574 gallons of kerosene, 2,447,900 gallons of fuel oil and 2,112,273 gallons of lubricating oil. In addition, there was a bulk shipment of 140,196 gallons of varnoline.

Australia's Oil Attitude

Reports have reached here of possible discriminatory duties on American oil products by the Government of Australia. This is nothing new. Several years ago the Anglo-Persian Oil Co. established a branch in Australia, with the intention of building up a refining industry and supplying the country's needs independent of American oil companies. Apparently the plan has not been placed in operation as yet, for agitation still exists.

In many respects, the plan is similar to that put forth by governors of some of the western States, namely of operating a government controlled agency in opposition to private concerns. Inasmuch as the prices maintained by the private companies are supposted to represent a fair economic price based on actual cost of raw material, cost of refining, transportation, etc., it is difficult to see how a government agency could give the people cheaper oil.

Austria Imposing Duty

The Austrian Government has increased the import duty on gasoline, solar oil, lubricants and other petroleum products. This represents the tendency on the part of many European governments, which American oil companies note with considerable concern.

Principal Exports

The following table shows principal exports of petroleum and petroleum products from New York reported during the last three weeks (figures in gallons unless otherwise noted):

	Week Ended		
	Aug. 5	July 28	July 21
Gasoline:			
Bulk	2,310,730	708,662	774,566
Barrels	.....	202,500	150,000
Cases	1,857,750	1,785,000	1,837,650
Kerosene:			
Bulk	2,099,574	716,354	4,805,650
Cases	2,878,980	1,188,500	1,634,050
Varnoline:			
Bulk	140,196	.....	.....
Fuel oil:			
Bulk	2,447,900	.....	.....
Lubricating oil:			
Bulk	2,112,273	.....	.....
Barrels	875,900	1,459,400	883,806
Cases	258,550	165,450	122,180
Lubricating grease:			
Barrels (lbs.)	245,900	607,500	117,900
Paraffin wax:			
Bags (lbs.)	630,740	3,266,680	2,157,760
Barrels (lbs.)	878,750	1,159,450	.....
Petroleum asphalt:			
Barrels (lbs.)	.....	3,726,860	373,500

The foregoing figures includes individual shipments of 500 bbls., 1,000 cases, or more.

Tanker Charter Market

The oil tanker charter market was fairly active, with rates showing a somewhat downward tendency. New fixtures were reported in all principal routes, including the following:

Tanker Baldbutte (Am.), 3,835 tons net, 70,000 bbls. crude oil, Gulf to north of Hatteras, 26 cents, September loading.

Tanker Niobe (Am.), 4,230 tons net, gasoline, California to United Kingdom, 44s. per ton, October loading.

Tanker Sunik (Fr.), gasoline or kerosene, Gulf to United Kingdom-Continent, 27s. 6d., August-September loading.

Tanker Aral (Br.), 3,500 tons net, gasoline, north Atlantic to north Spain, 25s., option Gulf loading, 31s., September loading.

Tanker Weidrecht (Du.), 4,490 tons net, gasoline or kerosene, north Atlantic to north Spain, 25s., option Gulf, 29s., September loading.

Tanker Athelmere (Br.), 7,600 tons net, gas oil, Tampico to United Kingdom, 25s. 6d., August loading.

Oil Receipts Large

Receipts of crude and refined oil at Atlantic Coast ports for the week ended August 4 are estimated at 4,785,000 bbls., a daily average of 683,000 bbls., compared with 4,463,000 bbls., or 638,000 bbls. a day, the preceding week.

One of the outstanding features was the continued large imports, which totaled 1,339,000 bbls., or a daily average of 191,000, for the week ended August 4. Of this total, Mexico accounted for 937,000 bbls., or 134,000 a day, and South America for 402,000 bbls., or 57,000 a day. The latter figure constitutes a record.

The following table shows estimated daily average receipts of crude and refined oil by water at Atlantic Coast ports from the Gulf and Pacific Coasts of the United States, and imports, for the last three weeks; also monthly record for the last 12 months (figures in barrels):

	Week Ended		
	Aug. 4	July 28	July 21
Gulf	399,000	403,000	308,000
Pacific	93,000	62,000	55,000
Imports	191,000	172,000	86,000
Total	683,000	637,000	449,000

Daily Averages by Months

	Gulf	Pacific	Imports	Total
1926:				
July	360,000	66,000	151,000	577,000
June	396,000	104,000	135,000	635,000
May	318,000	66,000	139,000	523,000
April	326,000	92,000	146,000	564,000
March	317,000	97,000	178,000	592,000
February	332,000	73,000	122,000	527,000
January	279,000	59,000	96,000	434,000
1925:				
December	298,000	56,000	103,000	457,000
November	259,000	36,000	92,000	387,000
October	249,000	36,000	102,000	387,000
September	306,000	66,000	76,000	448,000
August	291,000	54,000	90,000	435,000

The foregoing estimates are based on the carrying capacity of incoming oil-laden tankers.

CANADIAN FIELDS

(Continued from Page 122)

8-1-11w4, has resumed work with the standard outfit and is now drilling at 2,376 feet. The rotary outfit from this well has been transferred to Imperial Oil-Burdett No. 1, Section 8-11-11w4, in the Foremost Field, where a deep test for oil will be drilled. This test is drilling at 65 feet, and running three shifts.

In the Wainwright Field, east central Alberta, Emerald Oils, Ltd., LSD 8, Section 30-45-6w4, has drilled through the oil sand without developing the necessary gas pressure to flow the well.

In the Border fields, Urban Oils, Ltd., Section 4-1-15w4, near Coutts, is at 2,990 feet and drilling, after setting the 4½-inch casing at 2,942 feet. Near Skiff, northeast of Milk River, Devenish Petroleum Co., LSD 5, Section 27-5-14w4, is reported rigged up ready to spud in.

On the Montana side, the Wolfe Development Co., Section 27-35-2w, has finished No. 1, at 1,440 feet with an estimated initial flow of 400 bbls. a day. No. 2 has been started on the same section. Cascade Oils, Section 11-34-1w, is drilling below 1,100 feet. Deloraine Oil Co., Section 28-35-2w, financed by Manitoba capital, has finished No. 3 with an estimated production of 100 bbls. a day.

New Indian Reserve Open

A new field for development has been opened in the Stoney Indian Reserve at Morley. At a recent meeting the Indians, by a vote of 128 to 2, decided in favor of throwing open the reserve to leasing. The Indians had previously granted a drilling concession to the Reserve Oils, Ltd., which is reported down 1,400 feet with its test. A number of lease applications have been approved by the Indian department, subject to a vote of the Indians themselves.

In the Moose Mountain area, No. 2 Signal Hill, LSD 9, Section 34-23-5w5, is drilling close to 1,000 feet. Cherokee Oils, Section 33-23-5w5, has finished underreaming to the bottom of the 1,664-foot hole and recovered the lost diamond drill-head. Casing has been run down and drilling resumed.

Moose Mountain Oil Co., at its annual meeting, elected Lieutenant-Colonel McDonald, W. H. Lindsay, M. M. Porter, R. J. Gathergood and Leigh Walsh as directors. The company holds considerable acreage and is arranging for development on a royalty basis.

Willow Creek Leases

A Chicago syndicate, represented by E. R. Sager of Los Angeles, has blanketed 6,000 acres on the Willow Creek struc-

(Continued on Page 138)

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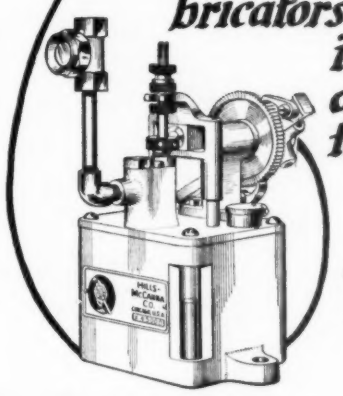

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Use of Charcoal Plants in Panhandle

Skelly Oil Co. Is Operating Several Units to Handle Flush Gas Production. Part of Permanent Equipment

By C. O. Willson

AMARILLO, Tex., Aug. 6.—In the Hutchinson County Field—the main crude producing pool of the Panhandle area—the Skelly Oil Co. has started operating the first units of its natural gasoline construction program, the second largest of this section.

The arrangement of the several units which comprise the Skelly program and the method of operation reflect the changed attitude in regard to the most efficient means of handling field conditions peculiar to the Hutchinson County Field. At the present time the Skelly company has three charcoal plants in operation in the field with three others under construction. A 20,000,000-foot capacity main plant of the oil absorption type is also under construction, making a total capacity when all units are completed of approximately 35,000,000 feet of gas daily.

Other charcoal units will be added later and the main plant enlarged, if field developments are such that they are deemed necessary by the management. In this connection the notable characteristic of the program is its flexibility providing either for the rapid expansion or contraction of equipment in line with field developments.

To appreciate the Skelly construction and operating program it is first necessary to understand the operating conditions in the Panhandle Field. As has been explained in previous articles appearing in The Oil and Gas Journal, producing wells in the Hutchinson County Field are widely scattered. The producers have directed their attention to proving up their leases which are generally held in large tracts rather than in intensive development which will come later. Due to this situation the natural gasoline manufacturer has to cover a large area with few wells in securing a gas supply.

It is also true that there is considerable yet to be learned about the gas supply. At present there is a large flow of gas with the oil, the bulk of which however, is coming from gas sands about the oil. This gas is low in gasoline content, averaging from one-half gallon to a gallon per 1,000 feet. Just what the field will do on a settled basis after additional wells are brought in on inside locations no one knows.

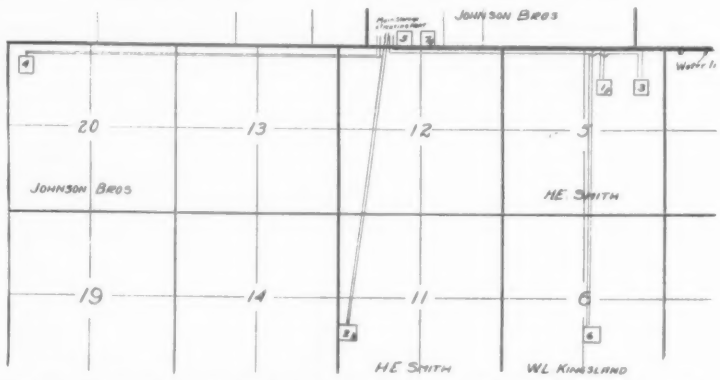
Another factor in the gas situation has been the keen competition for gas rights. This has meant that the manufacturers have made connections to wells almost as soon as they were completed. This situation contrasts with that of two or three years ago in which producers in a field similar to that of the Panhandle would not have expected to dispose of their casinghead gas for months after their wells had been completed.

After a survey of this situation the natural gasoline division of the Skelly Oil Co., which is headed by Emby Kaye, general superintendent, decided on the program previously mentioned as the most economical method of meeting all field requirements. To handle the flush gas production in the field the charcoal plants are being installed with the larger oil absorption plant the center of all activities in connection with the natural gasoline plant operations.

Charcoal Type Plants

The Skelly company is generally credited with being the pioneer company in the Mid-Continent Field in the wide use of the charcoal type of plant in natural gasoline manufacture. The company began using the charcoal units in its Oklahoma operations over a year ago and it was due to the results obtained that the management decided to make a still more important application of the process in the Panhandle.

The units used by the Skelly company while not to be classed as portable equipment can be readily moved from one field to another. This in fact has been done in the Panhandle. Three of the units—two of which are now in operation—were moved from the Davenport Field of Oklahoma. These units were used there for several months to handle flush gas while that field was being developed. The gas is now being taken care of by a large permanent plant with the aid of one small charcoal unit still in the field.



Map showing locations of natural gasoline plants of the Skelly Oil Co. in Block Y of the Hutchinson County Field in the Panhandle area. No. 5 is an oil absorption plant and the remainder are charcoal plants. Nos. 1, 2 and 7 are operating and the remainder under construction. Gasoline lines connect all plants to the main storage and treating plant.

The accompanying map shows the arrangement of the charcoal and absorption plants including those actually in operation and those under construction. It will be noted that the charcoal plants with the exception of the one at the main plant are located within a radius of about 2½ miles from the oil absorption plant.

The charcoal units are located in sections where the company has the gas rights and where one or more wells have been brought in furnishing the gas necessary for operation. Instead of waiting for the main plant to be finished and gathering lines laid to the wells, the charcoal plants were moved to the location and within two or three weeks placed in operation.

Main Plant

Based on present plans all the operating details will be centered at the central plant. The Skelly company in addition to its natural gasoline interest has considerable production with undeveloped leases in the Panhandle area. This has necessitated a central operating camp including the homes, dormitories, offices and warehouses with facilities for loading and unloading equipment. The natural gasoline division will have its headquarters at this point along with the production department.

At each charcoal plant a house has been built for the plant foreman or superintendent. He will stay at the plant all the time. In addition there is one man for each tower who will stay at the quarters provided at the main plant. This arrangement simplifies the labor problem of special importance in a field like the Hutchinson County area where living conditions are inadequate unless the companies provide facilities to take care of their employes and their families.

The gasoline manufactured at the outside charcoal plants will be pumped to the main plant. At that point it will be treated and loaded in tank cars. This arrangement does away with the necessity of several treating plants and loading facilities for each charcoal unit. One large treating plant is being erected which will handle all the gasoline. The company is also building approximately 1,000,000 gallons of pressure storage at the central plant.

The main plant is located adjacent to the line which the Santa Fe Railroad is building from the town of Panhandle to the center of the Hutchinson County Field. This line will probably be completed some time this month. The company will build a loading rack along the line to load all the gasoline produced.

Other operating features to be centralized at the main plant include the power plant and water system. The company is building one power plant sufficient to furnish electricity for all operations including the nautral gasoline division. The company has installed a water system which furnishes that necessity for the natural gasoline plants and field work. An adequate water supply is a difficult problem in the Panhandle Field. The Skelly company has secured a large supply of spring water about 7 miles from the main plant. This water is brought to the main camp in a large line with laterals leading to the charcoal plants.

Description of Plant

A description of the charcoal plants will probably be of interest to those not already familiar with that type of equipment, the newest method of processing in the natural gasoline industry. There is no set method of either construction or operation, the plants being adjusted to meet operating conditions.

As far as the gathering system is concerned, that used in conjunction with the operation of the Skelly plants is the same as any other type plants. The capacity of the charcoal plants is from 5,000,000 to 7,000,000 feet of gas. Engineers in charge of the Panhandle area expect to gather the gas within a radius of a mile from each plant.

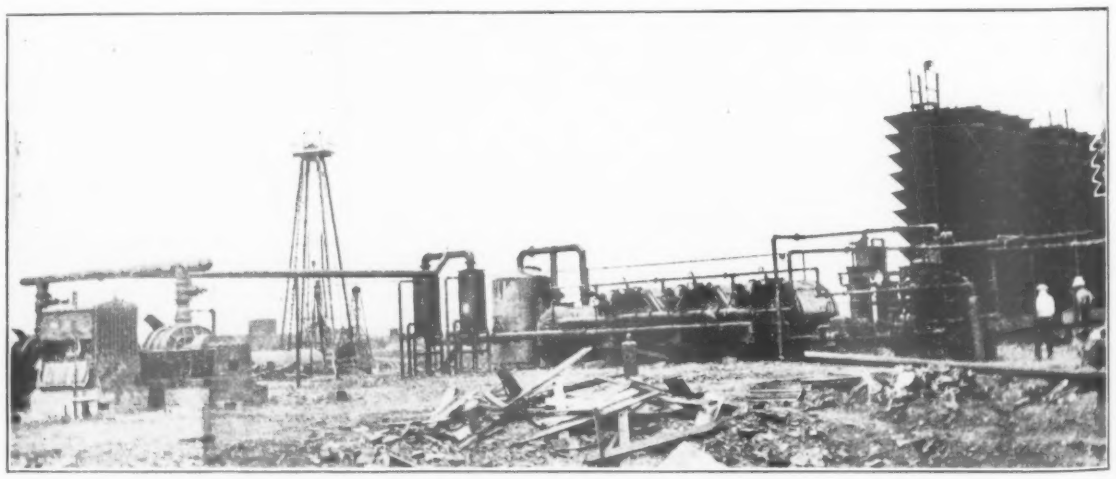
One of the advantages of the charcoal method of absorbing the gasoline from the gas is that it can be done at extremely low pressures. In fact the greatest efficiency is obtained when low pressures are used. For that reason it is often possible to operate on the well pressure provided they are not located long distances from the plant.

The gas coming from the wells by natural flow or by vacuum passes through the scrubber shown in the accompanying photo of the No. 2 plant of the company. After the gas has been cleaned by this operation it passes to the Root blowers also shown in the illustration. These blowers have been found to be an inexpensive method of boosting the gas to the 5 or more pounds pressure needed in the operation of the absorbers.

Type of Engines

Practically any type power can be used with these blowers. A Waukesha 120 horse power automotive type motor is used at one of the Skelly plants and Troy steam engines direct connected to the blowers are also used.

From the blower the gas is discharged



View of the No. 2 charcoal plant in operation before being covered with structural steel buildings.

into the two coolers of the Southwestern type shown in illustration. In these coolers the temperature is reduced from about 200 degrees Fahrenheit to 80 degrees Fahrenheit. From the coolers the gas passes to a charcoal scrubber. This is an improved type of scrubber also known as a tracifyer. This equipment is housed in a 6 by 8-foot tank.

From this scrubber the gas passes to the absorbers. The absorbers as shown in the illustration consist of small horizontal stills 6 by 8 feet. A header arrangement makes possible the passing of the gas to anyone of the three absorbers.

In operation one of the units is absorbing certain features of the gas, a second steaming the gas from charcoal and the third cooling after steaming. When the charcoal becomes saturated the gas automatically passes to the unit which has been cooling, the one which has been steamed is allowed to cool while the gas is steamed from the third unit. The cycle of operation for the three units is from 20 to 30 minutes depending largely on the nature of the gas. Several control instruments make this entire operation practically automatic.

The gas and steam from the unit which is being steamed then pass to the condensers. The method of fractionation does not differ materially from that of any other type plant except that care has to be taken to assure that the water and gasoline do not become mixed in condensing the steam and gases. The steam is first condensed out and then the gases pass to a dephlegmator where a finished product of the desired specification is obtained. A uniform endpoint is automatically obtained in the top of the dephlegmator with a coil arrangement through which water is pumped.

The cooling tower which is of the portable type is 11 by 23 by 24 feet with a capacity of 250 gallons per minute. Two 45 horse power oil field boilers furnish the steam needed for the operation of the plant. The operation of all phases of the plant is made as simple as possible through the use of control instruments, several of which are automatic so that only one operator for each tower is required. In building the plant the different divisions can be set either on wooden or steel piers.

The charcoal method, when properly operated, is a very efficient method of extracting gasoline when either lean or rich gas is being used. The efficiency is generally better than 100 per cent of the laboratory charcoal test.

Some of the residue gas at the present time is being returned to the leases for fuel. It is expected that a large part of surplus gas not needed for field use will be sold to carbon plants, one of which is now being built in the field.

ROCKY MOUNTAIN AREA

(Continued from Page 54)

regarding this area, the writers seem to be under the impression that this area is thickly studded with derrick and producing wells. One letter recently received states the Illinois Pipe Line Co. has laid a pipeline there a short time ago and that there are upwards of some 35 or 40 wells producing or drilling. As a matter of fact there are no wells and no pipeline of the Illino's Pipe Line Co. The whole idea of producing wells, drilling wells and pipelines is merely a figment of someone's vivid imagination.

Runs From the Field

Salt Creek	47,040
Teapot	1,330
Big Muddy	3,270
Grass Creek	3,160
Elk Basin	880
Greybull	20
Rock River	2,730
Notches	280
Rex Lake	250
Lance Creek	1,390
LaBarge	160
Poison Spider	880
Osage	350
Hamilton Dome	1,130
Mule Creek	Shut in
Lander	260
Byron	30
Pilot Butte	370
Lost Soldier	5,570
Ferris	60
Simpson Ridge	180
Cat Creek	2,760
Lake Basin	230
Sunburst	23,450
Florence	425
Moffat	3,558
Fort Collins	5,130
Tow Creek	760
Boulder	25
Rangeley	100
Hogback	720
Rattlesnake	1,215
Artesia	3,000
Total	110,663

INDUSTRY NEEDS FAIR PRICE, MAINTAINED

(Continued from Page 29)

in working out the major problems of the oil industry. Though, at present, the apparent interest of the Government is the securing of naval reserves for future use both for the present sea fleet and the air fleets of the future. But the board should be free from political and theoretical influences; and as in working out agricultural problems, the constructive thought must come from the industry.

A study of the situation, if pursued far enough, will disclose that the answer to the problem of a future supply is to be found not in the segregation of theoretically defined fields, but in the permanent stabilizing of prices, which will permit the constant operation of the old fields, in preparation for the newer methods of recovery that may unlock the hitherto unrecoverable oil. Indeed, the assurance of future supply may be brought about through present consumption, paradoxical as it may appear. For every barrel of oil recovered by the present pumping system, at least four remain in the ground; for every barrel recovered through advanced air or water methods, at least two remain in the ground. With the new sodium carbonate process, which the Government proposes to patent, and the development of new gases for use where flooding methods are not practicable, it is confidently expected that at least as much more oil can be taken out as has already been recovered. And the estimates of recoverable oil naturally rise with the development of every new pool; for with the apparent exhaustion of a field under old methods, at least twice the amount taken out may be said to be available for future recovery.

If the oil industry should properly present the basic facts to the board as to all branches of the industry; and should see that these facts get the widest publicity, we may confidently expect not antagonism from the Government but help in the solution of the problems, whatever form it may take. If co-operation instead of senseless competition is the answer, let it be stated. If co-operation is not possible, let that be stated, and plans for vast combinations frankly disclosed.

NO CHANGE IN TOTAL REFINERY CRUDE RUNS

(Continued from Page 30)

Refining Co., Grandfield, Okla.; Producers & Refiners Corp., Blackwell, Okla.; Red Seal Refining Co., Oklahoma City, Okla.; Sinclair Refining Co., Cushing, Okla.; Commonwealth Oil & Refining Co, Moran, Kans.; De Leon Refining and Pipe Line Co., De Leon, Tex., and the Sweetwater Refining Co., Sweetwater, Tex.

All of these are skimming plants with capacities under 5,000 bbls. daily. Several of the plants are in fair condition and may be operated later when market conditions are more favorable. A study of Tables 1 and 2 shows that the number of operating plants in the Mid-Continent is becoming less and less. A year ago there were 152 refineries in the Mid-Continent which had been in operation at least for a short time during the previous year. Then there were 126 plants actually in operation. Now there are only 126 refineries which have been in operation during the past year and only 111 of these are in operation at the present time.

This is indisputable evidence that refining, even in the Mid-Continent, is becoming more and more centralized. Operators if they have more than one plant are in several instances finding it expedient to concentrate their manufacturing activities and have less but more efficient plants. The shifting crude supply has also been a factor in the shut down of many of the plants.

Oklahoma

In Oklahoma there were several changes among the largest refiners in the state. The Mid-Continent Petroleum Corp., the largest refinery in the state, after maintaining a 25,000-bbl. average for almost a year reduced its runs 2,500 bbls. The Marland Refining Co., the second largest in the state, also reduced its runs from 20,000 to 16,500 bbls. The Champlin Refining Co., the third largest plant, boosted its runs again to 12,000 bbls. daily after running only 8,000 bbls. during July.

The Barnsdall Refineries, Inc., which was rerunning at its Okmulgee refinery the first of last month, is now running 4,000 bbls. daily. The company is maintaining the same average crude run at its Barnsdall, Okla., and Wichita, Kans., refineries. The Hewitt Refining Co. at Hewitt was closed down the first of the month. The Shaffer Oil & Refining Co. reduced the runs of its Cushing refinery 800 bbls. daily.

Kansas

The only development of any importance in the Kansas operations was the shut down of the Russell refinery of the Russell County Pipe Line Co. This plant was running 800 bbls. daily in July. The plant was shut down on the last day of July for an indefinite period. The shut down is understood to be due to the unfavorable market conditions.

North Central Texas

At Wichita Falls the plant of the Western Oil Corp. is running about 1,500 bbls. daily. This plant was shut down last month. This plant was formerly known as the Sunshine State Refining Co. Other changes in the north Texas area are of minor importance. The decrease for the entire area as shown in the table was only 500 bbls. daily.

Arkansas-North Louisiana

In north Louisiana, the Louisiana Oil Corp. reduced the crude runs to stills of its three plants from 19,000 bbls. daily to 17,000 bbls. This accounts for 200 bbls. more than the 1,800-bbl. reduction for the entire north Louisiana area. There were no important changes in Arkansas operations.

OIL INDUSTRY'S STAKE IN ROAD IMPROVEMENT

(Continued from Page 32)

to the previous statement, that when we think of what good roads save us we think of gasoline, lubricating oil, tires and fewer accidents, whereas the time saved, even on the foregoing conservative basis, is actually worth more than the $750,000,000 a year saved on the three items of operating expense.

Nearly all the railway mileage of the United States was built in one generation—and in the last 10 years we have abandoned nearly as many miles of railroad as we have built. The "tonnage" carried, however, is increasing with our industrial growth.

3,000,000 Miles of Road

The same general condition will prevail with our highways. Statistically we have 3,000,000 miles of highways today—this mileage will increase very slowly—but the percentage of it that will be hard surfaced and highly improved will increase very rapidly. The total amount of money spent each year for "new construction" will gradually decrease—and the amount spent for "maintenance" will just as naturally increase.

When the present Federal Aid system of highways—some 200,000 miles—is completed, the United States Government will have spent a grand total of probably not over $1,500,000,000. We will then have a real "national" system of highways—one that would have been absolutely impossible under the old system of "every state for itself."

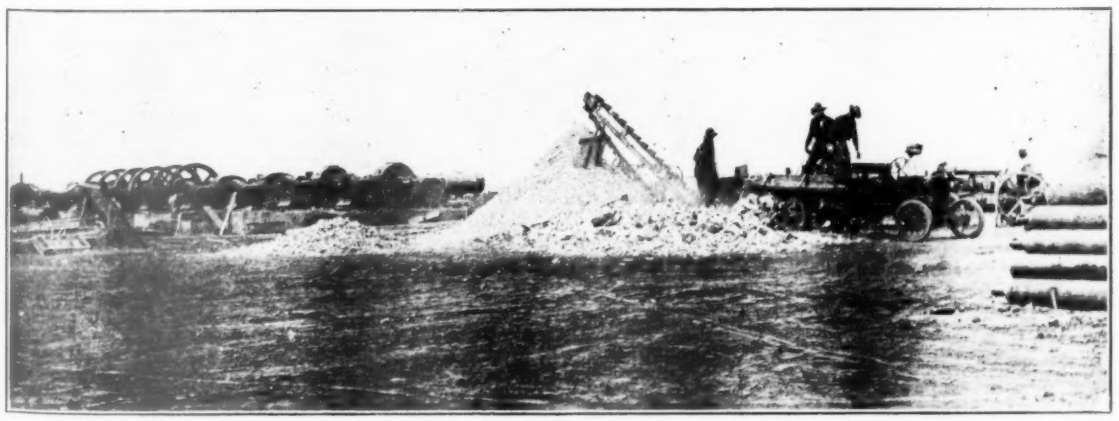
Thus, we are solving two very vital problems at the same time—building a great deal of good, new highway—and building a "national" highway system.

And in all of this maze of mileage we must not forget that during the 10 years that the states are co-operating with the United States Government in building 200,000 miles of high grade, strategic highway. These same 48 states with their counties, townships and road districts will build a great deal more than 200,000 miles of highway "on their on account."

Improved Standards

Another phase of this Federal highway program that is a valuable by-product of the association of United States Government engineers with state highway departments is the greatly improved standards of materials and practice that have been accepted by state officials and passed along to the road officials of counties, townships and road districts.

In the final analysis we will find that the participation of the Federal Government in the building of these 200,000 miles of highway has been the most constructive single thing in the history of road building in America.



Main oil absorption plant under construction. Rock crusher furnishes material for concrete work.

REFINING AND MARKETING

CALIFORNIA GASOLINE SALES SHOW INCREASE

LOS ANGELES, Calif., Aug. 7.—According to the State Board of Equalization, 228,400,141 gallons of gasoline were distributed in California during the second quarter of 1926, an increase of 28,905,073 gallons over the first quarter of this year and 25,122,774 gallons in excess of the sales during the second quarter of 1925. The 2-cent gasoline tax, which has been in effect since the latter part of 1923, yielded $4,522,322 during the quarter just ended, compared with $3,950,002 during the period preceding and $4,065,589 levied during the second period of last year. The money collected does not represent exactly 2 cents applied as a levy against each gallon of fuel distributed. The board allows a deduction of 1 per cent from the tax computed on the distribution totals and adds to the sales records reported by the various distributors an amount equal to one-ninety-ninth of the reported sales. Each of the computations is required by law in order to establish the levy as an excise tax rather than a direct charge on sales, and to make some allowance for losses from evaporation and other distribution leaks.

After refunds on account of the use of motor vehicle fuel for purposes exempt under the law, such as for farm tractors, the remainder of the tax fund is apportioned one-half to the counties and one-half to the State for road maintenance and reconstruction. The electorate of the State will a little later in the year vote on the advisability of increasing the gasoline tax from 2 cents per gallon to 3 cents and, while past records indicate that similar attempts of this kind have been defeated by the voters, conditions at present are somewhat different. The northern and central part of the State where gasoline consumption is lightest will undoubtedly vote overwhelmingly for the measure in view of the fact that a greater part of the road construction contemplated lies in that section. Southern California, on the other hand, contributing approximately 65 per cent of the tax money is expected to cast a negative vote because of the unequal distribution. The result is rather difficult to predict but if the proper action is taken the proposition can be defeated if desirable.

JULIAN AND MARINE CO. IN PROPOSED MERGER

LOS ANGELES, Calif., Aug. 7.—Additional details in connection with the proposed merger of the Julian Petroleum Corp. and the Marine companies was made known during the past week by S. C. Lewis, president of the former company. Based on present plans both companies will lose their identity, the merged organization to be known as the California-Eastern Oil Co., with combined assets placed at $31,745,027.85.

Both the Julian and Marine companies are large refiners on the Pacific Coast. The Julian corporation has a 6,000-bbl. skimming plant at Hynes, Calif., and the Marine Refining Co. a 10,000-bbl. plant at Vernon. The new company expects to enlarge its refining facilities.

The Julian corporation is also one of the largest independent distributing concerns in California. Other assets of the two companies includes some production, pipelines and natural gasoline plants.

HARVEY CAMPBELL RESIGNS

J. Harvey Campbell has resigned as vice president of the Industrial Petroleum Co. effective September 1. The Tulsa office of which Mr. Campbell was in charge will not be discontinued.

REFINING OPERATIONS IN POLAND AND EASTERN EUROPEAN COUNTRIES

Polish refiners last year handled 67,114 tank cars of crude oil according to Oliver von Szirmai, an engineer now in this country studying refining methods. Each tank car is equivalent to approximately 70 bbls. so that the total throughput of the Polish refineries last year was approximately 4,697,980 bbls., or 12,870 approximately 4,697,980 bbls. or 12,870 bbls. daily. These data do not include several smaller refineries which handle about 6 per cent of the crude refined in Poland.

In the accompanying table Mr. Szirmai gives the crude throughput of the 13 refinery organizations belonging to the Polish Petroleum Cartel (sales trust) which refined 94 per cent of the crude last year. A list of refineries in Hungary, Austria, Roumania, Czecho-Slovakia and Jugo-Slavia are also given:

POLAND

Company and Owner—	No. of Plant	Crude Run to Stills, 1925 Tk. Cars	Percentage
Polmin—Polish State	1	11,574	17.2
Dabrowa—Dabrowa	3	9,441	14
Premier—Premier	3	7,202	10.7
Galicja—Von Offenhiem	1	8,491	12.6
Limanowa—French Interests	1	6,078	9.1
Vacuum—Vacuum Oil Co.	1	7,170	10.6
Fanto—Fanto	1	5,014	7.5
Jaslo—Gartenberg & Schreier	1	4,960	7.4
Nafta—Photogen	1	2,935	4.4
Gazy—Goldman, Credit Anstalt, Vienna	1	717	1.1
Nobel, Standard Oil Co.	1	3,340	5.1
Polska Nafta—Photogen	1	192	....
Total	16	67,114	....

HUNGARY

Firm and Owner—	Yearly Capacity Tank Cars
Budapester Mineral Olfriks A. G. Budapest—Photogen	3,000
Ung. Petroleumindustrie A G—Doctor Freund	6,000
Vaterlandische Mineralolindustrie A. G. Budapest—Dabrowa	3,000
Vacuum Oil Co. Almasfuzita—Standard	6,000
Erste Satoraljaujhelyer Petroleumraaf S. A. Ujhely—Fanto	1,500
AUSTRIA	
A. G. der Wien-Floridsdorfer Mineralofabrik, Floridsorf—Shell	4,000
Schodnica A. G. fur Petroleumindustrie, Drosing—Dabrowa	1,500
Benzin-und Oi-Industrie A. G. Kagran	1,000
CZECHO-SLOVAKIA	
Appollo Mineralolraffinerie A. G. Bratislawa—Dabrowa	6,000
Bohmische Petrolumraffinerrie A. G. Kolin	2,500
Fantowerke A. G. Pardubitz—Fanto	15,000
Kraluper Mineralolraffinerie Lederer & Co.	3,500
Mineralolraffinerie G.mb. H Mahr, Schonberg—Premier	2,000
Oderfurter Mineralolwerke G m.b.H. Oderfurt	5,000
Odra Mineralolindustrie A. G. Bohumin—Photogen	6,000
RUMANIA	
Mineralolraffinerie, Tileagd—Fanto	4,000
Mineralolraffinerie, Orsova—Fanto	4,000
Marosvasarhelyer Petroleumraffinerie A. G. Marosvasarheky	1,500
Photogen Rafineria de Petrol S. A. Brasov—Photogen	2,500
Desrer Mineralolindustrie A. G. Des	1,000
ITALY	
Raffineria di Olli Minerali S. A. Fiume—Photogen	3,600
Triester Mineralolraffinerie, Triest—Standard	3,000
JUGO-SLAVIA	
Danica A. G. fur Chemische Industrie, Bosn Brod—Pester Ung Kommerzial-bank	3,000

PROMINENT TULSANS BUY CONSTANT REFINING CO.

The purchase of the assets of the Constant Refining Co. by J. J. McGraw, Pat Malloy and John Markham, Jr., of Tulsa was announced during the past week. The properties concerned are the assets of what was formerly known as the Constantin Refining Co.

This company was one of the largest refinery organizations in the Mid-Continent Field during the World War and up to 1922 when it was placed in the hands of a receiver. The refineries located at Duval and West Tulsa, Okla., were shut down at that time and have not been operated since. About a year ago the company was reorganized under the name of the Constant Refining Co.

Some of the properties of the original company include the skimming plant at Duval, Okla. Early in the summer the marketing facilities of the company centering in Tulsa were sold to the Continental Oil Co.

All the remaining properties are involved in the latest sale. This includes producing properties in Arkansas and Oklahoma and the small skimming plant at West Tulsa. According to Mr. Malloy, who was president of the Constant Refining Co. and receiver of the original company, the new owners do not contemplate making any changes in the operation of the properties at this time.

MOVES OFFICES

The Manhattan Oil Co. of Kansas City, Mo., has moved its general offices from the Land Bank Building to the seventh and eighth floors of the Security Building.

STANDARD ANSWERS SUIT

CHICAGO, Aug. 10. — The Standard Oil Co. of Indiana yesterday filed its answer to the suit brought by the Independent Oil Men of America seeking $1,000,000 in the "Red Hat" trademark case.

The Standard makes a general denial and states it has suffered damages due to the actions of the plaintiff. The Independent Oil Men of America is the marketing branch of the National Petroleum Marketers Association.

MICHIGAN OIL JOBBERS

CHICAGO, Aug. 7 —J. J. Thiesen, of St. Joseph, Mich., entertained the Michigan oil jobbers at a Field Day on August 5. Many of the local oil men went over and enjoyed the sports and good time generally. Secretary Gilmore acted as master of ceremonies.

SELLS TO TAXMAN

Edwin F. Borgolte, president of the Atlas Petroleum Co., marketing organization, with headquarters in Kansas City, Mo., has sold his stock in the company to the Taxman interests. Mr. Borgolte has organized the Security Petroleum Co. with offices in the Security Building. J. J. Taxman and Myer Taxman will manage the affairs of the Atlas company.

NATIONAL PETROLEUM ASSOCIATION SESSION

The annual meeting of the National Petroleum Association will be held at the Hotel Traymore, Atlantic City, September 15, 16 and 17, according to an announcement by Fayette B. Dow, counsel of the association.

Although the complete program will not be announced until later, Mr. Dow says, several prominent speakers have been secured for the three-day meeting. The work of the various departments will be given a prominent place on the program, particularly the marketing, manufacturing, traffic and fire prevention groups.

RATES ON PETROLEUM EAST OF MISSISSIPPI

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 7.—The Interstate Commerce Commission has announced that the initial hearing in connection with its investigation of the freight rates on petroleum and petroleum products east of the Mississippi River will be held in St. Louis, Mo., on October 4, before Examiner J. B. Keeler. In the notice, Commissioner B. H. Meyer says:

"If any of the interested parties desire to introduce their evidence at places other than St. Louis, they should so advise me promptly so that arrangements for subsequent hearings at convenient points may be made. It is believed they can be materially shortened if the interested parties will consent to an exchange of exhibits prior to the hearing.

"It is requested that parties who intend to introduce evidence advise me on or before August 20, whether they will agree to such a plan."

APEX BUYS CHICAGO PLANT

CHICAGO, Aug. 7.—The deal between the Apex Motor Fuel Co., Charles Rosenthal, manager, and the Indian Refining Co., for the latter's plant at 3200 South Western Ave., has finally been completed, certain details which delayed the final signing of the papers having been ironed out. The plant has been closed down since the Indian Refining Co. sold its stations in this city. It is a complete bulk plant with tankage for upwards of 150,000 gallons of gasoline and large lub oil storage. The price paid was roughly $200,000. The Apex Motor Fuel Co. will remove its offices from the present location at 4555 West 26th St. to the plant some time before the end of the month.

N. P. M. A. RESIGNATIONS

CHICAGO, Aug. 10.—Weston Atwood, manager of the Collective Buying Department of the National Petroleum Marketers Association and J. L. Murray in charge of the department of markets of the same association, have resigned.

INTERSTATE STATIONS SOLD

The 10 service stations of the Interstate Refineries, Inc., at Kansas City, Mo., were sold during the past week to Elmer Scott and John G. James for a consideration of $55,550. These stations have been operated for some time through a lease by the Sinclair Refining Co. The Interstate company is in the hands of a receiver.

TOWERS

All Types
Every Size

ERECTED
ANYWHERE

Graver Builds

Tanks
- *Welded*
- *Riveted*
- *Noms* (Riveted, Inside & Outside Welded)
- *Structural Supports*
- *Tower Tanks*
- *Standpipes*
- *Any Size Tanks Erected Anywhere*

Refinery Equipment

Jenkins Cracking Process

Stacks-Breechings

General Steel Plate Construction

Water Softeners
- *Hot Process*
- *Cold Process*
- *Zeolite*
- *Household*

Filters—*Pressure*

Purifying Systems *for* **Swimming Pools**

GRAVER *Corporation* Founded 1857

EAST CHICAGO, INDIANA

NEW YORK Grand Cent. Term. | CHICAGO Steger Building | TULSA Atlas Life Bldg. | HOUSTON West Building

Brief Items for Plant Operators

MOTOR VEHICLE FLEET OPERATION COMMITTEE

A general committee on motor vehicle fleet operation and maintenance, consisting of 23 members, has been appointed by the council of the Society of Automotive Engineers to represent the large and growing section of the society's membership interested mainly in the operation, maintenance and servicing of fleets of motor vehicles.

Subjects that have been recommended for study by this new committee are uniform methods to be used by operators for testing oils and fuels, efficient garage layouts and equipment, data on the life of important vehicle parts, special maintenance and servicing tools and equipment built by fleet operators, issuance of engineering data and specifications on types and makes of chassis; definitions of terms such as "operation," "inspection," "repairing," "overhauling," and "reconditioning"; and the development of a uniform system for comparing vehicle performance or useful life and costs of maintenance.

J. F. Winchester, supervisor of motor equipment for the Standard Oil Co., Newark, N. J., is chairman of the committee, and Boyd V. Evans, chief engineer of the Detroit Motorbus Co., is vice chairman.

NIGGER CREEK OIL HAS HIGH GASOLINE CONTENT

The crude oil produced to date in the new Nigger Creek Field of the Mexia district in Texas is a high gravity product from which refiners will be able to secure large gasoline yields either by skimming or cracking. The oil at the wells has been running about 40 A.P.I. gravity.

During the past week the Transcontinental Oil Co., owner of the discovery well in the field, had distillation tests made at its Fort Worth, Tex., refinery of two of its completed wells. The oil from No. 2 Cochrum had a gravity of 39.1 after the sample was taken to the laboratory. The gravity of the No. 1 Rossen was 39.4.

Following are summaries of the two distillation tests:

No. 1 Rossen

Crude gravity, 39.4; gasoline, 37.40 per cent; 62.8 gravity, 128 I.B.P., 426 M.P.; kerosene, 17.50 per cent, 43.1 gravity, 150 flash, 178 fire; fuel oil btms., 42 per cent, 25.9 gravity, 270 flash, 310 fire, 15 C.T.; loss, 3 per cent.

No. 2 Cochrum

Crude gravity, 39.1; gasoline 36.30 per cent, 61.4 gravity, 130 I.B.P., 434 M.B.P.; kerosene, 12.50 per cent, 42.7 gravity, 160 flash, 186 fire; fuel btms. 48.20 per cent, 25.3 gravity, 270 flash, 310 fire, 10 C.T.; loss, 3 per cent.

START HOLMES-MANLEY UNITS

The Crown Central Petroleum Corp. has started the installation of three Holmes-Manley cracking units at its refinery on the Houston ship channel. The refinery output in the past has been largely confined to lubricating oils. With the new cracking equipment the company will also have a substantial yield of gasoline.

SINCLAIR OFFICIALS CONFER

CHICAGO, Aug. 7. — Technical men and refining managers from all of the plants of the Sinclair Refining Co. met at the plant at East Chicago for a general conference regarding refining problems. R. J. Black, superintendent of the East Chicago plant, was in charge of the conference. Among those present were George H. Taber, vice president Sinclair Refining Co., Chicago; Carl H. Sawyer, manager of refineries; John S. Huff, New York, chief engineer; Superintendents W. R. Argyle, Marcus Hook; J. W. Dackett, Houston, Tex.; B. J. Healey, Crawfordsville, Kans.; G. Debbington, Kansas City; O. W. Walchley, Wellsville, N. Y.; A. J. Morrison, Philadelphia; Lloyd Cannon, Olmstead, Ill.; F. A. Sittwell, Chicago; P. E. Dow, Muskogee, Okla.

UNION OIL CO. STARTS MORE CRACKING UNITS

The Union Oil Co. of California has just placed its third and fourth cracking units in operation, the first two having been given their preliminary run a few weeks ago. These four Cross units, upon which work was started six months or so ago, are located at the company's Wilmington refinery, near Los Angeles, and have a charging capacity of 9,000 bbls. daily. It is reported these installations have exceeded expectations during their short life to date. Diesel oil is being used as a charging stock, the current run being around 4,500 bbls. daily.

WAINWRIGHT REFINERY

It is reported that Kling-Del Refineries, Ltd., has ordered materials for the first 1,000-bbl. unit of a refining plant at Wainwright, Alberta, Canada, to be completed within eight weeks. The company has a site just west of the town and arrangements have been made for railroad sidings.

INSTALLS GRAY TOWERS

The Vacuum Oil Co. has contracted with the Gray Process Corp. for the installation of the Gray towers. These towers with clay as medium treat gasolines in the vapor phase. Several units of the Gray tower are now in operation at refineries in the United States.

NORTH PENN REFINING UNDER RECEIVERSHIP

OIL CITY, Pa., Aug. 7.—Stearns Marshall and H. M. Wick have been named temporary receivers of the North Penn Refining Co. of Tiona, Pa., according to notice sent to creditors as follows:

"After a thorough and careful consideration of the affairs of this company, the board of directors reached the conclusion that a fair and equitable protection to all of its creditors and the ultimate liquidation of all the company's indebtedness could not only come through a receivership. Upon the application and request of the company the court has therefore appointed Stearns Marshall and H. M. Wick, temporary receivers. Mr. Marshall is treasurer and a director of the company and has been closely connected with its affairs. Mr. Wick is a prominent attorney of Bradford.

"The creditors of the North Penn Refining Co. may rest assured that in the hands of these receivers the business of the company will be managed as economically and efficiently as possible and that the interests of all the creditors and the payment of their claims are foremost in the minds of the receivers. The present appointment of receivers is temporary and a further hearing is set for August 18, at which time all parties in interest may be heard. It is sincerely hoped the creditors will feel their interests are being protected by this action and that the present receivership may be continued at this later hearing. In the meantime if there are any questions or information desired by any creditor the company will be glad to answer or furnish the same upon request."

AMONG THE TECHNICAL MEN

Making extensive changes in operations of a refinery without a shut down was a difficult task accomplished by W. J. Leenhouts, superintendent of the Johnson Oil Refining Company, at Cleveland, Okla. Mr. Leenhouts supervised the installation of considerable new and more modern equipment, which has been completed only this month.

W. J. Leenhouts

Mr. Leenhouts has been superintendent of the Cleveland plant two years, going there from the Indian Refining Company, at Lawrenceville, Ill., where he had been chemist. He was a chemist in Lawrenceville eight years, first at the plant of Central Refining Co., and then after the Central company was bought by the Indian Refining Company, in 1920, he was transferred to the Indian company's main plant.

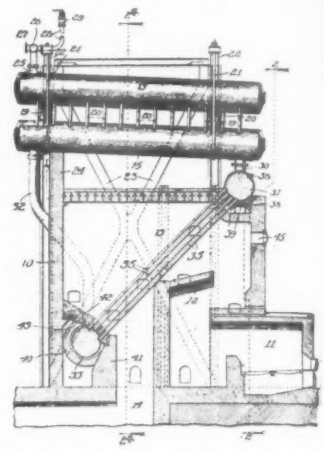
However, for a year during the World war, Mr. Leenhouts was away from the Central plant to serve in the United States air service as lubrication engineer. But after the war he returned to his former position.

Before going with the Central Refining Company, he was petroleum chemist for the State of North Dakota two years, a position he accepted after teaching chemistry a year in that State, following his graduation from the university.

Mr. Leenhouts holds a master of science degree from the University of North Dakota at Grand Forks, which he obtained after two years of postgraduate work. Previous to this he received a bachelor of science degree from Hope College, at Holland, Mich. He is a native of the latter city.

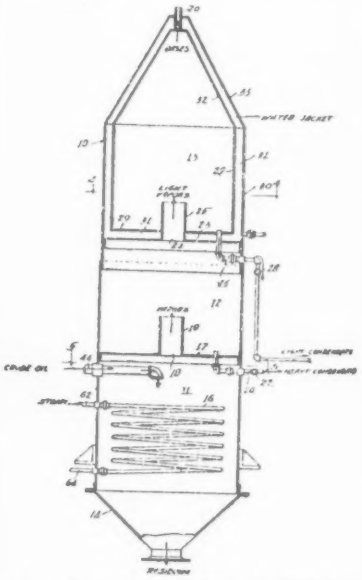
Recent Patents

1,582,929. Pressure Oil Still. Robert E. Humphreys, Whiting, Ind., assignor to Standard Oil Co., Whiting, Ind., and Chicago, Ill., a corporation of Indiana. Filed January 7, 1921. Serial No. 435,700. 18 Claims. (Cl. 196—109.)



8. In a still for cracking oil, a heating chamber having a furnace connected thereto, an upper and lower drum located outside heating chamber and furnace, tubes connecting the drum and passing through the heating chamber, storage drums above and outside said heating chamber, and connections between said storage drums and said upper and lower drum, located outside said chamber.

1,580,372. Apparatus for Distilling Hydrocarbons. Norton F. W. Hazeldine, Los Angeles, Calif. Filed May 9, 1922. Serial No. 559,511. 3 Claims. (Cl. 196—102.)



1. In an oil distilling apparatus a tank and a substantially horizontal partition dividing the tank into vertically adjacent chambers, an inner shell within the upper chamber and spaced apart from the walls thereof to provide a jacket for cooling fluid, an opening in the partition, a riser extending upwardly from said opening and projecting through and above the bottom wall of said inner shell, and means for drawing liquid from said shell at a point beneath the outlet opening of the riser.

Oil Securities Were Generally Soft

Standard of New Jersey Dropped to 43 But International Petroleum Subsidiary Was Strong and Active Past Week

By N. O. Fanning

New York Bureau, The Oil and Gas Journal, 30 Church St., New York

NEW YORK, Aug. 9.—Oil securities were generally soft during the past week, selling being particularly evident in Standard of New Jersey common which dropped to 43. International Petroleum, a subsidiary, on the contrary was strong and active.

Standard of New York

The Standard Oil Co. of New York has declared a dividend of 40 cents a share. This is at the rate of $1.60 a year, as against a rate of $1.40 previously paid. The dividend is payable September 15 to stockholders of record August 20.

Standard of New Jersey

The action of Standard Oil of New York in increasing its dividend is taken as an indication of the current prosperous condition of the oil business, and of that company's confidence in its future. Stockholders of the Standard Oil Co. of New Jersey, meanwhile, are confident they will receive a larger dividend when the next payment is due. The company's 1925 earnings were at the rate of $4.72 a share on the stock, as against a dividend rate in effect since the dissolution of $1 a share based on the present stock unit. Standard Oil Co. of New York in 1925 earned $3.63 a share, and has now raised its rate to $1.40 a year.

The question in the minds of many Jersey company common stockholders is not whether there will be an increase in the dividend, but how much that increase will be. Expectations range from 50 cents to $1 a year, or from the present rate of $1 a year to either $1.50 or $2 a year, with the former rate most favored in the guessing.

Tide Water Oil

The syndicate formed by Blair & Co. and the Chase Securities Co. to underwrite the $240,000,000 merger of Tide Water Oil Co. and Associated Oil Co. has been extended to September 20. It is expected that 1,800,000 no par shares of common stock will be offered to the public before that time, or else offered privately.

New Oil Companies

Thirty-four new oil companies with a total capital of $40,334,000 were organized in the United States under the laws of the various states during July, according to figures compiled by the Journal of Commerce. This capitalization represents an increase over the corresponding month last year, which totaled $37,689,690, distributed among 23 concerns, but shows a sharp decline from June, 1926, which had a total of $73,316,000, distributed among 38 companies.

The figures of the Journal of Commerce over the past few years are extremely interesting, reflecting, as they do, the ebb and flow of incorporations with the speculative tides of business. It must be understood that the figures for capitalization represent the nominal amounts for which the companies are capitalized, and do not mean the amount of cash actually invested.

The figures of capitalization of new oil companies incorporated since January 1, 1918, by years, are given as follows:

1926 (first 7 months)	$ 474,860,400
1925	1,890,726,000
1924	787,031,000
1923	962,403,840
1922	1,157,972,000
1921	1,255,657,000
1920	3,786,814,000
1919	3,786,006,000
1918	2,134,547,006

The rate for 1926 based on the showing for the first seven months would be $814,046,200, the smallest year of any except 1924.

Another significant feature is that while the nominal capital of the combined incorporations has tended smaller in recent years, the actual cash invested in the oil business has increased materially, the bulk of it, however, in existing enterprises.

New Richfield Oil

The Richfield Oil Co. of California is being organized in Delaware with $60,000,000 authorized capital for the purpose of consolidating the United Oil Co. and the Richfield Oil Co. In connection with the arrangements, there is expected to be some financing which will be handled by Bond & Goodwin & Tucker, and Aronson & Co.

New York Transit

Directors of the New York Transit Co. have voted to omit payment of the quarterly dividend due at this time. On July 15 the company paid a dividend of $1.25, on April 15 a dividend of $1 and in the four quarters preceding a dividend of 75 cents.

D. S. Bushnell, president of the company, in a statement to stockholders, explained the reasons for this action. "Following previous advices to stockholders as to sharp competition presented by tank ship transportation," he states, "your directors must now inform you that a sudden and severe curtailment of the movement of crude petroleum to the Atlantic Seaboard by pipeline has made necessary the omission of any distribution at this time."

The New York Transit Co. is operating a total of 1,520 miles of pipelines, including a main line supplying the Standard Oil Co. of New York refinery at Brooklyn, N. Y. It operates a gathering system in the old New York State fields and is a link in the main trunk system delivering crude from the Mid-Continent Field.

Superior Oil

The Superior Oil Corp. for the quarter ended June 30, 1926, reports a deficit of $192,962 after interest, depreciation and depletion, comparing with a deficit of $182,798 in the preceding quarter and a deficit of $120,064 in the second quarter of 1925.

A deficit for the first six months of 1926, of $375,760, was reported, against a deficit of $243,941 in the same period of 1925.

The income for the six months ended June 30, 1926, compares as follows:

	1926	1925
Gross	$547,151	$737,955
Expenses, int., etc.	569,315	463,411
Depreciation	203,969	270,765
Depletion	209,627	247,720
Deficit	$375,760	$243,941

The Vacuum Oil Co. declared a quarterly dividend of 50 cents a share and an extra dividend of 50 cents a share, both payable September 20, to stockholders of record August 31.

The Ohio Oil Co. declared an extra dividend of 50 cents a share and the regular dividend of 50 cents, both payable September 15, to stockholders of record August 14.

The Continental Oil Co. has declared the regular quarterly dividend of 25 cents a share, payable September 15, to stockholders of record August 14.

Imperial Oil, Ltd., declared the regular quarterly dividend of 25 cents, payable September 1 to stockholders of record August 14.

The California Petroleum Corp. declared the regular quarterly dividend of 50 cents a share, payable September 1 to stockholders of record August 14.

The Standard Oil Co. of California declared a dividend of 50 cents a share, payable September 15, to stockholders of record August 16.

The Oil Well Supply Co. declared the regular quarterly dividend of 50 cents a share, payable October 1.

NEW YORK STOCK EXCHANGE—LIST OF ACTIVE STOCKS

Stocks—	Par	Clos. Quot. Aug. 9	Clos. Quot. Aug. 2	1926 High	1926 Low	1925 High	1925 Low	1924 High	1924 Low
Amerada Corp.	..	32	30¼	34⅞	21⅞	..	..	..	..
Atlantic Ref., com.	100	114	114⅝	128⅝	97	117½	95⅛	140½	78½
Barnsdall "A"	25	26	25¾	33½	23½	33½	18¾	29½	14
California Pet., com.	25	33⅛	33⅛	38⅛	30⅝	34⅝	23⅞	29	19⅜
Houston Oil	100	*60	60¾	72	50¼	85	59	82½	61
Independent Oil & Gas	..	26½	26⅝	34	20¼	41⅜	15½	16¼	9⅜
Indian Refining	10	10⅝	10⅞	13⅜	9½	14¼	5½	7	3⅜
Lago Oil & Trans.	..	22	22⅞	24½	19¼	..	..	..	..
Louisiana Oil	10	16⅛	17	19⅝	12	23¾	13⅜	..	..
Maracaibo	..	22½	22⅝	28⅜	20¾	35½	20⅜	37¼	25⅜
Marland	..	59	59⅜	63⅜	49¼	69⅛	32⅝	42	29
Mexican Seaboard	..	11⅞	12⅝	13⅞	6	22½	9	25⅜	14½
Mid-Continent Pet.	..	32¼	30½	41	25⅝	38	25¾	40¼	22⅝
National Supply	50	*65	64¾	66	55½	71	54⅝	72⅜	54
Oil Well Supply	25	34⅜	35	36	30	38	33⅜	..	..
Pan. Amer., B.	50	68⅛	67½	78⅝	56⅛	85⅜	50½	66	44½
Pan. Amer., Western B.	..	38¼	38	46	34	49¾	37⅛	..	..
Phillips Pet.	..	47⅝	48⅜	49½	42½	47⅛	36¼	52¼	28½
Producers & Refiners	50	12	11⅛	17½	11	32⅝	12½	32½	29⅝
Pure Oil, com.	..	27⅜	27⅜	31	25⅜	33¾	25⅛	30¼	20
Royal Dutch, N. Y., sh.	13.40	49¼	49⅜	56⅞	45⅜	57⅜	48¼	58½	40⅝
Shell Transport	10	*44	*43	48⅞	42	49	39⅜	42	33
Shell Union, com.	..	27⅜	28¾	28¾	24	28¾	21⅝	22½	15⅜
Simms Pet.	10	17	18⅛	28⅝	16½	28½	17⅞	24	10⅝
Sinclair Consolidated, com.	..	21½	21¼	24⅞	13⅝	24⅞	17	17½	15
Skelly Oil	25	34⅛	34⅛	37⅛	27	32½	21⅜	29	17⅛
Standard of California	25	59½	60⅜	62⅞	54	67¼	51½	68½	55⅛
Standard of New Jersey, com.	25	43	45¼	46⅜	40¼	47½	38⅜	41½	33
Sun Oil Co.	..	32⅞	*31	41⅝	30⅛	43⅜	38⅛	..	..
The Texas Company	25	53½	54½	56	48	55	42⅜	45⅝	37⅜
Texas Pacific Coal & Oil	10	14⅝	14⅞	15½	12⅛	23⅜	11	15⅛	8⅛
Tide Water Oil	25	31	*31	39¼	30⅛	..	..	..	..
Transcontinental	..	4⅞	5⅛	5½	3	5⅞	3½	6¼	3⅜
Union Oil of California	25	53¼	53⅝	58	37¼	43⅝	33⅛	39	35⅛
Union Tank, com.	100	*94	*92	94⅞	84½	‡134	118	132⅝	94
White Eagle Oil & Refining	..	26⅛	26¾	29⅜	25⅛	31⅝	25⅝	29⅝	23⅛
Standard Oils									
Anglo-American Oil	£1	16⅞	*17½	19¾	16½	26⅜	17½	18¾	14⅝
Borne Scrymser	100	295	*280	295	226	240	205	164	150
Buckeye Pipe Line	50	48	47⅝	59½	47⅝	72	63½	85½	51
Chesebrough Mfg. Co.	25	*73	*73	72¾	63	74	48¼	62½	29½
Continental	10	21⅝	21¼	25⅞	19¼	31⅛	21⅞	..	..
Crescent Pipe Line	25	*16	*16	16	14½	17½	10	20	11⅝
Cumberland Pipe Line	100	113	111	137	108	156	128	148	108
Eureka Pipe Line	100	*47	53	63⅜	47⅜	96	61½	105	74
Galena Signal, com.	100	*18½	*18	32½	17¼	68½	23½	69¾	62½
Humble Oil & Refining Co.	25	62⅝	63¼	68⅛	52	99	42½	43⅜	36
Illinois Pipe Line	100	134½	*134	144	131	154½	124	161	123
Imperial Oil, Ltd.	..	36¾	35⅝	38¾	32½	39¼	27¼	119	99
Indiana Pipe Line	50	59½	*61	68	58	84	87½	100	66
International Pet. Co.	10	35	34	35½	28¾	35⅞	22⅛	34⅜	16⅞
National Transit Co.	12.50	*14	15	20⅜	14½	25½	16½	25⅞	20⅝
New York Transit	100	*35½	43	51½	33¼	79	50	97	54½
Northern Pipe Line	100	*67½	70	80½	68	88	67½	107½	72
Ohio Oil Co.	25	62	59	67⅜	55⅜	75¼	60	79½	53
Penn.-Mex. Fuel	25	*21	*22	24½	15	44	19	35⅝	27
Prairie Oil & Gas	25	51½	52¼	60¼	48	65½	45⅜	269	193
Prairie Pipe Line	100	125⅜	*126	127	122½	129¾	105	111	100
Solar Refining Co.	100	220	189	212	181½	259	200	240	170
South Penn Oil	25	39¾	39¾	50	35	‡197	139	176	117
Southwest Pa. Line	100	*50½	*50½	56	47½	84	50	89	68
Southern Pipe Line	50	*23½	*25	74½	61½	103	63	100	80½
Standard of Indiana	25	65	64½	70½	61⅝	70¾	59½	69⅝	54¼
Standard of Kansas	25	22	22¼	36½	21	46	30¼	50½	32½
Standard of Kentucky	25	*124	124	134⅝	108	137	114⅝	‡217⅛	101
Standard of Nebraska	100	47½	47	†51½	†42	270	231	262	198
Standard of New York	25	33⅝	33⅞	47½	30⅝	48⅝	40	48	37⅜
Standard of Ohio, com.	100	293	295	362	292½	369	338	337½	277
Swan & Finch, com.	25	*17½	*17½	21	18	27	12	28	20
Vacuum Oil	25	103	103½	109⅜	94⅛	109½	80½	83½	50½
Miscellaneous									
Gulf Oil Corp. of Pa.	25	85½	86¼	93⅜	82½	98¼	63½	67⅜	56
Tide Water Associated	..	24½	24¼	27	21	..	..	..	..

*Bid, no sales. ‡Old stocks. †New stocks.

The Oil and Gas Journal's week average price of 20 representative petroleum stocks listed on the New York Stock Exchange was as follows:

Aug. 9	59.35	July 2	50.38	May 28	59.81
Aug. 2	59.76	June 28	60.17	May 24	58.84
July 26	58.44	June 21	59.91	May 17	57.63
July 19	59.45	June 14	59.40	May 10	57.08
July 12	59.43	June 7	58.92	May 3	57.23

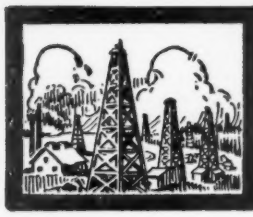
MARKED IMPROVEMENT IN CALIFORNIA SALES

LOS ANGELES, Calif., Aug. 7.—The domestic demand for gasoline on the west coast is at its height. Sales are showing a marked improvement over last year, with indications this will continue. The larger oil companies are closely watching the situation as to both production of crude and gasoline, and also the stocks of these commodities. The industry in general is co-operating to a greater extent in protecting the market from an overproduction of either gasoline or crude.

Standard Oil Co. of California has recently extended the shutdown of the old Kern River wells taken over from the Pacific Oil Co., so that this entire section, consisting of close to 200 wells, is now shut in. Figures recently published show that during the first half of 1926, the shut in production of crude in California was almost 57,000 bbls. per day. This is heavy oil production which is certainly not needed under present market conditions.

The Ventura Avenue Field has shown substantial increases in production and geologists predict this increase will continue. The oil is high gravity, for the most part, and since it is almost entirely in the hands of big operators, production is not being pushed to the point where it will seriously affect marketing conditions. The controlled development of this field is one of the factors enabling the California oil market to continue to hold its present strength.

Shipments of petroleum products out of Los Angeles Harbor reached a total of over 2,300,000 bbls. during the past week. A big proportion of this was taken in the Pacific domestic trade. Only one cargo of 73,902 bbls. of gasoline went to the Atlantic Seaboard.



REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields

GASOLINE AND NAPHTHA

	Aug. 10		Aug. 3		July 27	
OKLAHOMA (Group 3)—						
50-52 450 end point	.10¾	.11	.11		.11	
56-58 450 end point	.10¾	.11	.11	.11⅛	.11⅛	.11¼
58-60 450 end point	.11		.11⅛	.11¼	.11¼	.⅜
58-60 437 end point (U. S. Motor)	.11¼	.11½	.11⅜	.11½	.11⅜	.11½
60 62 400 end point	.11¾		.11¾	.11⅞	.11⅝	.12
64-66 375 end point	.12	.12⅛	.12⅛	.12¼	.12	.12¼
68-70 360 end point	.12¼	.12½	.12⅜	.12½	.12½	
KANSAS—						
58-60 437 end point (U. S. Motor)	.11½	.11¾	.11¾	.11⅞	.11¾	.11⅞
NORTH TEXAS—						
48 50 450 end point (Naphtha)	.10¾		.10¾	.11	.10⅞	.11
50-52 450 end point (Naphtha)	.10¾	.11	.10¾	.11	.10⅞	.11
56-58 450 end point	.10¾	.11	.11	.11¼	.11	.11⅛
58-60 437 end point (U. S. Motor)	.11	.11¼	.11¼		.11¼	.11⅜
60-62 400 end point	.11½	.11¾	.11⅝	.11¾	.11⅝	.11¾
64 66 390 end point	.11⅜	.11¾	.11¾	.11⅞	.11¾	.11⅞
64-66 375 end point	.11¾	.12	.12		.12	
68-70 360 end point	.12¼	.12½	.12⅜	.12½	.12⅜	.12½
NORTH LOUISIANA—						
58-60 437 end point (U. S. Motor)	.11½		.11½	.11¾	.11½	.11¾
64-66 375 end point	.12	.12¼	.12¼	.12½	.12¼	.12½
ARKANSAS—						
58-60 437 end point (U. S. Motor)	.11½		.11⅝	.11¾	.11¾	
64-66 375 end point	.12		.12¼	.12½	.12¼	.12½
ROCKY MOUNTAIN STATES—						
*58 60 437 end point (U. S. Motor)	.14¼	.14½	.14½	.14⅝	.14⅜	.14½
PENNSYLVANIA—						
52 Naphtha	.12½	.12¾	.12½	.12¾	.12½	.12¾
54 Naphtha	.12¾	.13	.12¾	.13	.12¾	.13
56 Naphtha	.13	.13¼	.13	.13¼	.13	.13¼
58 Naphtha	.13¼	.13½	.13¼	.13½	.13¼	.13½
60 Gasoline	.13¾	.14	.13¾	.14	.13¾	.14
62 Gasoline	.14½	.14¾	.14½	.13¾	.14½	.14¾
64 Gasoline	.14¾	.15	.14¾	.15	.14¾	.15
66 Gasoline	.15¾	.16	.15¾	.16	.15¾	.16
68-70 Gasoline	.17¾	.18	.18¼	.18½	.18¼	.18½
CALIFORNIA—						
54-58 437 end point (U. S. Motor) domestic	.12	.12½	.12	.12½	.12	.12¼
CHICAGO DISTRICT (Based on Group 3)—						
50 52 450 end point (Naphtha)	.11		.11		.10¾	.11
56-58 450 end point	.11		.11	.11¼	.11⅛	.11¼
58-60 437 end point (U. S. Motor)	.11¼	.11½	.11½	.11¾	.11⅜	.11½
60-62 400 end point	.11¾	.12	.11¾	.12⅛	.11¾	.12
64 66 375 end point	.12⅛	.12¼	.12¼		.12⅛	.12¼
68-70 360 end point	.12½	.12¾	.12½	.12¾	.12¾	

*Colorado points.

NATURAL GASOLINE

	Aug. 10		Aug. 3		July 27	
OKLAHOMA (Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.08¾		.08½		.08½	
Grade A, 72 79.9, 375 e.p., rec. 90%	.08¾	.08⅞	.08½	.08⅝	.08½	.08⅝
Grade BB, 84 92, 375 e.p., rec. 85%	.08⅜	.08½	.08¼	.08½	.08¼	.08⅜
Grade B, 76-83.9, 375 e.p., rec. 85%	.08⅜	.08½	.08¼	.08½	.08¼	.08⅜
Grade C, 80 90, 375 e.p., rec. 78%	.08⅛	.08¼	.08	.08¼	.08	.08¼
NORTH TEXAS—						
Grade AA, 80-87.9, 375 e.p., rec. 90%		.08¾	.08½		.08½	
Grade A, 72-79 9, 375 e.p., rec. 90%		.08¾	.08½	.08⅝	.08½	
Grade BB, 84-92, 375 e.p., rec. 85%	.08⅜	.08½	.08¼		.08¼	
Grade B, 76-83.9, 375 e.p., rec. 85%	.08⅜	.08½	.08¼		.08¼	
Grade C, 80-90, 375 e.p., rec. 78%	.08⅛	.08¼	.08	.08¼	.08	.08¼
NORTH LOUISIANA—						
Grade A, 72-79.9, 375 e.p., rec. 90%	.09 -	.09⅛	.08⅞	.09⅛	.08⅝	.09
Grade B, 76 83.9, 375 e.p., rec. 85%	.08⅞	.09	.08½	.08⅞	.08½	.08⅞
Grade C, 80-90, 375 e.p., rec. 78%	.08⅞	.09	.08½	.08¾	.08½	.08¾
CALIFORNIA—						
75-85, 375 390 end point			.15½	.16	.15½	.16
CHICAGO DISTRICT (Based on Group 3)—						
Grade AA, 80-87.9, 375 e.p., rec. 90%	.08⅝	.08¾	.08½	.08⅝	.08¼	.08½
Grade A, 72-79.9, 375 e.p , rec. 90%	.08⅝	.08¾	.08½	.08⅝	.08¼	.08½
Grade BB, 84-92, 375 e.p., rec. 85%	.08¼	.08½*	.08¼	.08¾	.08	.08¼
Grade B, 76-83.9, 375 e.p., rec. 85%	.08¼	.08½*	.08¼	.08¾	.08	.08¼
Grade C, 80-90, 375 e.p., rec. 78%	.08⅛	.08¼	.08	.08⅛	.08	

MOTOR NATURAL GASOLINE (BLENDS)

	Aug. 10		Aug. 3		July 27	
OKLAHOMA (Group 3)—						
60-62 450 end point	.10½	.10¾	.10½	.10¾	.10½	.10¾
64-66 437 end point	.10¾		.10¾		.10¾	
NORTH TEXAS—						
64 66 437 end point	.10⅝	.10¾	.10⅝	.10¾	.10⅝	.10¾
PENNSYLVANIA—						
*60-62	.13½	.13¾	.13½	.13¾	.13½	.13¾
*64 66	.13¾	.14	.13¾	.14	.13¾	.14
*66-68	.13¾	.14	.13¾	.14	.13¾	.14
*68-70	.14	.14¼	.14	.14¼	.14	.14¼
CHICAGO DISTRICT (Based on Group 3)—						
60-62 450 end point	.11		.10¾	.11	.10½	
64-66 437 end point	.11	.11¼	.11	.11¼	.10½	.10¾

*At Sistersville, W. Va.

BURNING OIL

	Aug. 10		Aug. 3		July 27	
KANSAS—						
41-43 water white Kerosene	.08¼	.08½	.08½	.08⅝	.08⅜	.08⅝
OKLAHOMA (Group 3)—						
41-43 water white Kerosene	.07¾	.08	.08		.08	.08¼
42-44 water white Kerosene	.08¼	.08½	.08½	.08⅝	.08½	.08¾
NORTH LOUISIANA—						
41-43 prime white Kerosene	.08	.08¼	.08¼	.08½	.08¼	.08½
ROCKY MOUNTAIN STATES—						
*40 41 water white Kerosene	.11¼	.11½	.11¼	.11½	.11	.11⅛
NORTH TEXAS—						
41-43 water white Kerosene	.07½	.07¾	.07¾	.08	.07⅞	.08
ARKANSAS—						
41-43 water white Kerosene	.08	.08¼	.08¼	.08½	.08	.08¼
PENNSYLVANIA—						
43 Kerosene prime white	.09½	.09¾	.09¼	.09½	.08½	.08¾
45 Kerosene water white	.09¾	.10	.09½	.09¾	.08¾	.09
46 Kerosene water white	.10	.10¼	.09¾	.10	.09¼	.09½
47 Kerosene water white	.11	.11¼	.10¾	.11	.10	.10¼
34 Neutral	.07½	.07¾	.07½	.07¾	.07½	.07¾
34 Sundebloom Neutral	.08½	.08¾	.08½	.08¾	.08½	.08¾
36 Miners' Neutral	.06¾	.07	.06¾	.07	.06¾	.07
300 Mineral Seal	.07¾	.08	.07¾	.08	.07¾	.08
CALIFORNIA—						
38 40 water white (high burning test)	.07½	.08	.07½	.08	.07½	.08½
Engine distillate, 43-45 445 end point	.09¾	.10	.09¾	.10	.09¾	.10
Engine distillate, 42-44 480 end point	.09¼	.09½	.09¼	.09½	.09¼	.09½
CHICAGO DISTRICT (Based on Group 3)—						
41-43 water white Kerosene	.08		.08¼	.08½	.08	
42-44 water white Kerosene	.08½		.09		.08¼	.08½

*Colorado points.

FUEL OILS

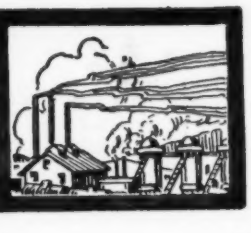
	Aug. 10		Aug. 3		July 27	
KANSAS—						
24-26 Fuel Oil	1.35	1.40	1.35	1.40	1.35	1.40
32-36 Gas Oil	.04½	.04⅝	.04⅝	.04¾	.04½	.04¾
38-40 Distillate	.05¼	.05½	.05¼	.05½	.04⅞	.05⅛
OKLAHOMA (Group 3)—						
Below 22 Fuel Oil (sellers' cars)	1.25		1.25		1.25	
22 26 Fuel Oil (sellers' cars)	1.27½	1.30	1.27½	1.30	1.25	1.30
24-26 Fuel Oil (sellers' cars)	1.30	1 35	1.30	1.35	1.30	1.35
26 30 Fuel Oil (sellers' cars)	1.35	1.37½	1.35	1.37½	1.35	1.37½
28 30 Fuel Oil (sellers' cars)	1.45	1.50	1.45	1.50	1.45	
32-36 Gas Oil (cracking stock)	.04¼	.04⅜	.04⅜	.04½	.04⅛	.04⅜
36 38 Distillate	.04¾	.05	.04¾	.05	.04½	.04⅝
38-40 Straw Distillate	.05	.05¼	.05	.05¼	.04¾	.04⅞
NORTH TEXAS—						
24-26 Fuel Oil (sellers' cars)	1.45	1.50	1.40	1.45	1.32½	1.37½
32-36 Gas Oil (straw)	.04¼	.04⅜	.04⅜	.04½	.04⅛	.04¼
38-40 Straw Distillate	.05	.05¼	.05	.05¼	.04⅝	.04⅞
NORTH LOUISIANA—						
18-20 Fuel Oil	1.32½	1.37½	1.35	1.40	1.35	1.40
32-36 Gas Oil (straw)	.04½	.04¾	.04¼	.04½	.04¼	.04½
32-36 Gas Oil (dark)	.04¼	.04½	.04⅛	.04¼	.04⅛	.04¼
36-38 Distillate	.04⅞	.05	.04¾	.05	.04½	.04¾
ARKANSAS—						
38-40 Distillate	.04¾	.05	.04¾	.05	.04½	.04¾
32-36 Gas Oil	.04½	.04¾	.04½	.04¾	.04¼	.04½
16-20 Refinery Fuel Oil	1.20	1.25	1.22½	1.25	1.25	1.30
GULF COAST (South Texas)—						
Gas Oil	.05⅝	.05¾	.05⅝	.05¾	.05½	.05¾
Fuel Oil	1.75	1.85	1.75	1.85	1.75	1.85
PENNSYLVANIA—						
30-34 Fuel Oil	.05¾	.05⅞	.05¾	.05⅞	.05¾	.05⅞
36-40 Fuel Oil	.06¼	.06½	.06¼	.06½	.06¼	.06½
CALIFORNIA—						
33 36 Distillate	.04	.04¾	.04	.04¾	.04	.04¾
27-32 Distillate	.03¾	.04	.03¾	.04	.03¾	.04
15-20 Fuel Oil (at tide water)	1.00	1.04	1.00	1.04	1.00	1.04
27 plus Diesel	1.15	1.19	1.15	1.19	1.15	1.19
CHICAGO DISTRICT (Based on Group 3)—						
24-26 Fuel Oil (sellers' cars) Group 3	1.30	1.35	1.27½	1.32½	1.25	1.30
22-26 Fuel Oil (sellers' cars) Group 3	1.25	1.30	1.25	1.30	1.22½	1.25
18-22 (Group 3)	1.25	1.27½	1.25	1.27½	1.20	1.22½
18-20 (Smackover)	1 20	1.25	1.22½	1.25	1.20	1.22½
32-36 Gas Oil	.04¼	.04⅜	.04⅜	.04½	.04⅛	.04⅜
36-38 Distillate	.04¾	.05	.04⅞	.05	.04½	.04⅝
38-40 Straw Distillate	.05⅛	.05¼	.05		.04¾	.05

LUBRICATING OILS AND WAX

	Aug. 10		Aug 3		July 27	
OKLAHOMA (Group 3)—						
70-80 vis., 2½ color, 20 25 cold test	.06	.07	.06	.07	.06	.07
100 vis., 3 color, 20-25 cold test	.06½	.07	.06½	.07	.06½	.07
100 vis., 2 color, 20 25 cold test	.07	.07½	.07	.07½	.07	.07½
150 vis., 4 color, 20-25 cold test	.09¾		.09¾		.09¾	
150 vis., 3 color, 20-25 cold test	.09½	.10	.09½	.10	.09½	.10
180 vis., 4 color, 23-28 cold test	.10	.10½	.10	.10½	.10	.10½
180 vis., 3 color, 23-28 cold test	.10½	.11½	.10½	.11½	.10½	.11½
200 vis., 4 color, 23-28 cold test	.11¼	.11½	.11¼	.11½	.11¼	.11½
200 vis., 3 color, 23-28 cold test	.11¼	.12¼	.11¼	.12¼	.11¼	.12¼
220 vis., 4 color, 25-30 cold test	.13		.13		.13	
220 vis., 3 color, 25 30 cold test	.13½	.14	.13½	.14	.13½	.14
240 vis., 4 color, 25-30 cold test	.14	.14½	.14	.14½	.14	.14½
240 vis , 3 color, 25-30 cold test	.14½	.15	.14½	.15	.14½	.15
280 vis., 4 color, 25 30 cold test	.15½	.16½	.15½	.16½	.15½	.16½
280 vis., 3 color, 25-30 cold test	.16½	.17	.16½	.17	.16½	.17
180 vis., 5 color, 23-28 cold test	.09¾	.10¼	.09¾	.10¼	.09¾	.10¼
200 vis., 5 color, 23-28 cold test	.10¾	.11¼	.10¾	.11¼	.10¾	.11¼
220 vis., 5 color, 25-30 cold test	.12	.12¾	.12	.12¾	.12	.12¾
240 vis., 5 color, 25-30 cold test	.13	.14	.13	.14	.13	.14
280 vis., 5 color, 25-30 cold test	.15	.16	.15	.16	.15	.16
Cylinder Stocks:						
180 200 vis., S. R. green, 40-45 cold test	.08¼	.11	.08¼	.11	.08¼	.11
190-200 vis., S. R. green, 40 45 cold test	.08	.08½	.08	.08½	.08	.08½
170-190 dark green, 40-45 cold test	.06	.06½	.06	.06½	.06	.06½
190-200 vis. @ 210 "D" Bright Stock	.33	.35	.33	.35	.33	.35
200-210 vis. @ 210 "E" Bright Stock	.30	.31	.30	.31	.30	.31
150 vis. @ 210 "E" Bright Stock	.27	.28	.27	.28	.27	.28
150 vis. @ 210 "D" Bright Stock	.28	.31	.28	.31	.28	.31
Waxes:						
122-124 White Crude Scale Wax	.04¾		.04¾		.04¾	
PENNSYLVANIA—						
150, 3 color	.23		.23		.24	
180, 3 color	.26½		.26½		.27½	
200, 3 color	.28½		.28½		.29	
220, 3 color	.30		.30		.31	
600, steam refined	.13½		.13½		.13½	
635, steam refined	.17		.17		.17	
650, steam refined	.18		.18		.18	
600, Pennsylvania flash	.25½		.25½		.25½	
630, Pennsylvania flash	.33		.33		.32½	
*550, E filtered	.19		.19		.19	
600, E filtered	.19½		.19½		.19½	
*600, E filtered	.20½		.20½		.20½	

REFINERY AND CRUDE PRICES

Quotations on Principal Refined Products and Crude Petroleum Markets in All the American Oil Fields



600, D filtered	.26½		.26½		.26½	
550, E filtered	.18		.18		.18	
550, D filtered	.22		.22		.22	
Pennsylvania Bright Stock	.41½		.41½		.41	
122-124 White Crude Scale Wax	.05¼	.05⅜	.05¼	.05⅜	.05¼	.05⅜
†124-126 White Crude Scale Wax	.05⅜	.05½	.05⅜	.05½	.05⅜	.05½

*At Warren, Pa. †At New York City.

GULF COAST (South Texas)—						
Zero Black	.06	.07	.06	.07	.06	.07
No. 2 color, 100 vis., pale oil	.07½	.08	.07½	.08	.07½	.08
No. 3 color, 200 vis., pale oil	.11½	.12	.11½	.12	.11½	.12
No. 3½ color, 300 vis., pale oil	.12½	.13½	.12½	.13½	.12½	.13½
No. 3¾ color, 500 vis., pale oil	.14½	.15	.14½	.15	.14½	.15
No. 4 color, 750 vis., pale oil	.18½	.19	.18½	.19	.18½	.19
No. 2 plus color, 200 vis., pale filtered	.21½		.21½		.21½	
No. 2 color, 300 vis., pale filtered	.24½		.24½		.24½	
No. 2½ color, 500 vis., pale filtered	.27½		.27½		.27½	
No. 2½ color, 750 vis., pale filtered	.35½		.35½		.35½	
No. 5 to 6 color, 200 vis., red oil	.09½	.10	.09½	.10	.09½	.10
No. 5 to 6 color, 300 vis., red oil	.11½	.13	.11½	.13	.11½	.13
No. 5 to 6 color, 500 vis., red oil	.12½	.13	.12½	.13	.12½	.13
No. 5 to 6 color, 750 vis., red oil	.16½	.17½	.16½	.17½	.16½	.17½
CALIFORNIA—						
130 vis., 2½-3 color	.10	.11½	.10	.11½	.10	.11½
200 vis., 2½ 3 color	.13½	.14½	.13½	.14½	.13½	.14½
300 vis., 3 3½ color	.15	.16	.15	.16	.15	.16
350 vis., 3½ 4 color	.16½	.17½	.16½	.17½	.16½	.17½
400 vis., 3½-4 color	.18	.19	.18	.19	.18	.19
Red Neutrals:						
200 vis., 4½-5 color	.12	.13	.12	.13	.12	.13
300 vis., 5 -6 color	.13	.14	.13	.14	.13	.14
400 vis., 5 -6 color	.15	.16	.15	.16	.15	.16
500 vis., 4½-5 color	.18	.19	.18	.19	.18	.19
500 vis., 6 -6½ color	.16	.17	.16	.17	.16	.17
600 vis., 6½ plus color	.17	.18	.17	.18	.17	.18

Note: Bright stocks are not manufactured commercially on the Pacific Coast.

NEW YORK (BAYONNE) REFINERY PRICES

Gasoline:	Aug. 10	Aug. 3	July 27
U. S. Motor, 58-60 437	.14½	.14	.14
Export, 63-66 375	.16	.16	.16
Kerosene, prime white, 41 43	.10	.09½	.09
*Bunker Oil 14 16, per bbl.	1.75	1.75	1.75
*Diesel Oil 28-30, per bbl.	2.50	2.50	2.50
Gas Oil, 28 plus	.06¾	.06¾	.06¾
Cylinder Oil, light filtered, 600 s.r.	.29	.29	.29
Bright Stock, No. 5, 150 vis., at 212 F.	.41	.41	.41
White Neutral, No. 1, 170 vis., 1 color	.37	.37	.37
Pale Oil, "25," 170 vis., 3½ color	.13	.13	.13
Pale Oil, "28," 100 vis., 2 color	.08	.08	.08
Red Oil:			
No. 3, 160 vis., 7 color	.11	.11	.11
No. 2, 212 vis., 5½ color	.12	.12	.12
No. 1, 265 vis., 5½ color	.13½	.13½	.13½
Polar, 295 vis., 6 color	.14	.14	.14
Paraffin Wax, refined:			
120-122 a.m.p., per lb.	.06	.06	.06
125-127 a.m.p., per lb.	.06⅛	.06⅛	.06⅛
130-132 a.m.p., per lb.	.06½	.06½	.06½
135-137 a.m.p., per lb.	.07	.07	.07
Petrolatum, in bbls., per lb.:			
Dark green	.01⅞	.01⅞	.01⅞
Amber	.03⅛	.03⅛	.03⅛
Light amber	.03½	.03½	.03½
Cream	.05½	.05½	.05½
Lily white	.07½	.07½	.07½
Snow white	.08½	.08½	.08½

*Lighterage 5.5c a barrel extra.

NEW YORK CASE EXPORT PRICES

	Aug. 10	Aug. 3	July 27
Gasoline, U. S. Motor, 58-60	.28.90	.28.90	.28.90
Kerosene:			
Standard white Kerosene	.19.15	.19.15	.18.90
Water white Kerosene	.20.65	.20.65	.20.15

LOS ANGELES EXPORT PRICES

	Aug. 10		Aug. 3		July 27	
Kerosene water white	.05½	.06½	.05½	.06½	.05½	.06½
U. S. Motor Gasoline, 54-56 437 e.p.	.10	.10½	.10	.10½	.10	.10½

CRUDE OIL PRICES

OKLAHOMA, KANSAS AND NORTH TEXAS

***Prairie Oil & Gas Co.**
(Oklahoma, Kansas and North and East Central Texas)
(Effective May 15)

28° to 28.9°	$1.65
29° to 29.9°	1.73
30° to 30.9°	1.81
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.21
36° to 36.9°	2.29
37° to 37.9°	2.37
38° to 38.9°	2.45
39° to 39.9°	2.53
40° to 40.9°	2.61
41° to 41.9°	2.69
42° to 42.9°	2.77
43° to 43.9°	2.85
44° to 44.9°	2.93
45° to 45.9°	3.01
46° to 46.9°	3.09
47° to 47.9°	3.17
48° to 48.9°	3.25
49° to 49.9°	3.33
50° to 50.9°	3.41
51° to 51.9°	3.49
52° and above	3.57

*Other major purchasers except as noted below.

Champlin Refining Co.
(Garber and Tonkawa)
(Effective May 15)

Schedule based on Prairie Oil & Gas Co. paying 10 cents additional for each grade of crude above 38° gravity.

Humble Oil & Refining Co.
(Effective May 15)
(North and East Central Texas, Ranger, Mexia, Powell, Richland, Wortham, Currie, Moran, Big Lake, Nacona and Lytton Springs)

Same prices as Prairie Oil & Gas Co. schedule. Postings below 28° gravity 8 cents less for each degree, effective June 21.

Magnolia Petroleum Co.
(Effective May 15)
(Oklahoma, Kansas and North and East Central Texas, except Corsicana heavy, and Lytton Springs of South Central Texas)

Below 28°	$1.30
Other grades same as Prairie Oil & Gas Co.	
Iatan	$1.15
Corsicana heavy	1.25
Panola County:	
30° to 34.9°	$1.95
35° to 37.9°	2.10
38° and above	2.25

Texhoma Oil & Refining Co.
(Wichita Falls, Tex., District)
(Effective May 16)

28° to 28.9°	1.70
29° to 29.9°	1.78
30° to 30.9°	1.86
31° to 31.9°	1.94
32° to 32.9°	2.02
33° to 33.9°	2.10
34° to 34.9°	2.18
35° to 35.9°	2.26
36° to 36.9°	2.34
37° to 37.9°	2.42
38° to 38.9°	2.50
39° to 39.9°	2.58
40° to 40.9°	2.66
41° to 41.9°	2.74
42° to 42.9°	2.82
43° to 43.9°	2.90
44° and above	2.98

TEXAS PANHANDLE

Kay County Gas Co.
Magnolia Petroleum Co.
(Effective May 15)

28° to 28.9°	$1.35
29° to 29.9°	1.40
30° to 30.9°	1.45
31° to 31.9°	1.50
32° to 32.9°	1.55
33° to 33.9°	1.60
34° to 34.9°	1.65
35° to 35.9°	1.70
36° to 36.9°	1.75
37° to 37.9°	1.80
38° to 38.9°	1.85
39° and above	1.90

Humble Oil & Refining Co.
(Effective June 21)

39° to 39.9°	$1.90
40° to 40.9°	1.95
41° to 41.9°	2.00
42° to 42.9°	2.05
43° to 43.9°	2.10
44° and above	2.15

Grades below 39° gravity same as posted by Magnolia Petroleum Co. and Kay County Gas Co.

Plains Pipe Line Co.
(August 1)

28° to 28.9°	$1.10
29° to 29.9°	1.15
30° to 30.9°	1.20
31° to 31.9°	1.25
32° to 32.9°	1.30
33° to 33.9°	1.35
34° to 34.9°	1.40
35° to 35.9°	1.45
36° to 36.9°	1.50
37° to 37.9°	1.55
37° to 38.9°	1.60
39° and above	1.65

GULF COAST

***Humble Oil & Refining Co.**
(Effective May 15)

Grade A	$1.60
Grade B—	
Below 25°	1.50
25° to 25.9°	1.55
26° to 26.9°	1.60
27° to 27.9°	1.65
28° to 28.9°	1.70
29° to 29.9°	1.75
30° to 30.9°	1.80
31° to 31.9°	1.85
32° to 32.9°	1.90
33° to 33.9°	1.95
34° to 34.9°	2.00
35° and above	2.05
Boling (December 26)	1.50
High Island (Sun Oil Co.) (Apr. 30)	1.40

The Texas Company
(Effective June 8)

Grade A	$1.60
Grade B	1.50
†Light crude—	
35° to 35.9°	2.05
36° to 36.9°	2.10
37° to 37.9°	2.15
38° to 38.9°	2.20
39° to 39.9°	2.25
40° and above	2.30

*The Sun Pipe Line Co.'s postings same as Humble Oil & Refining Co.'s.

†The Texas Company's postings on light crude under 35° gravity are same as Humble Oil & Refining Co.'s grades and prices for Grade B crude.

Spindletop
(August 9)

Grade A	$1.35
Grade B	1.15

SOUTH CENTRAL AND SOUTHWEST TEXAS

***Magnolia Petroleum Co.**

Luling (contract) (Eff. May 18)	$1.80
Mirando (Webb, Jim Hogg and Zapata Counties) (May 15)	1.25
Rockdale-Minerva (Milam County)	1.25
Thrall	1.00
Calliham (Live Oak and McMullen Counties) (May 15)	1.75
§Lockhart (Lytton Springs)	
Somerset (Grayburg Pipe Line Co.):	
(Effective May 17)	
28° to 28.9°	1.25
29° to 29.9°	1.35
30° to 30.9°	1.71
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.20
36° to 36.9°	2.29
37° to 37.9°	2.37
38° and above	2.45

*Texpata Pipe Line Co. and Humble Pipe Line Co. also post in Mirando Field paying same prices as Magnolia Petroleum Co.

§Lockhart prices same as for North and East Central Texas. Lockhart posted by Magnolia Petroleum Co. and Humble Oil & Refining Co.

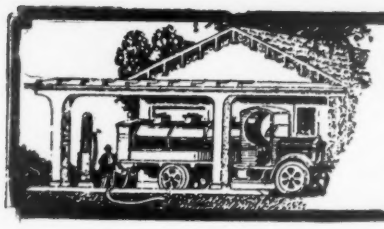
ARKANSAS AND NORTH LOUISIANA

Standard Oil Co. of Louisiana
(Effective May 18)

Caddo:	
Below 26° (July 24)	$1.40
26° to 28.9° (July 24)	1.55
29° to 31.9° (July 24)	1.70
32° to 34.9°	2.25
35° to 37.9°	2.35
38° and above	2.45
Homer below 31°	1.85
31° to 32.9°	2.00
33° to 34.9°	2.10
35° and above	2.20
Haynesville below 33°	2.00
33° and above	2.10
El Dorado below 33°	2.00
33° to 34.9°	2.10
35° to 36.9°	2.20
37° and above	2.30
Bull Bayou, 32° to 34.9°	1.95
35° to 37.9°	2.10
38° and above	2.25
Cotton Valley	1.20
DeSoto	2.30
Crichton	2.10
Bellevue	1.50
Smackover, below 24°	1.10
24° to 24.9°	1.35
25° to 25.9°	1.40
26° to 26.9°	1.45
27° and above	1.50
*Stephens, Ark., below 26°	1.45
26° and above	1.65
†Calion (East El Dorado)	1.10
‡Urania (May 26)	1.25

Other companies posting in these fields are: Gulf Pipe Line Co.; Atlantic Oil Producing Co. in Homer, Haynesville, El Dorado and Smackover; The Texas Com-

(Continued on Page 143)



TANK WAGON MARKETS

Tankwagon quotations for gasoline and kerosene in United States as furnished by the larger marketing concerns, Aug. 10.

ALL TANK WAGON AND SERVICE STATION QUOTATIONS INCLUDE TAXES

STANDARD OIL CO. (INDIANA)
Main Service Station Price

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Chicago Dist.—				
†Less than 100 gals.	19.0	21.0	...	13.5

Tank wagon prices on April 19, 1922; g. up 1½c; May 8, up 1c; June 27, g. and k. up 1c; July 19, g. down 2c, k. down 1c; Oct. 10, g. down 2c; Oct. 21, g. down 1c; Feb. 5, 1923, g. up 1c; Feb. 20, g. up 1c; Aug. 14, g. down 6.6c; Oct. 4, k. down 1½c; Nov. 10, g. down 1.4c; Dec. 20, g. up 2c; Jan. 12, 1924, g. up 2c; k. up 1c; Feb. 5, g. up 2c, k. 1c; July 18, g. down 1c; July 30, g. and k. down 1c; Sept. 12, g. down 2c; Jan. 23, 1925, g. up 1c; Jan. 26, g. up 1c; Jan. 31, g. up 1c; Feb. 12, g. up 2c, k. up 1c; April 19, g. down 1c; July 14, g. up 1c; Aug. 25, g. down 2c, k. down 1c; Sept. 1 g. down 1c; Feb. 4, 1926, g. up 1c; k. up 1c; April 16, 1926, k. up 1c; April 24, 1926, k. up ½c; April 29, 1926, g. up 1c, k. up ½c; May 6, 1926, k. up ½c May 17, g. and k. up 1c July 1, k. down 1c; July 3, k. down 1c.

Decatur, Ill.	19.2	21.2	...	14.0
E. St. Louis	18.1	20.35	...	13.1
Joliet	19.4	21.4	...	14.2
Peoria	19.2	21.2	...	14.0
Quincy	19.2	21.2	...	13.8
Davenport, Ia.	21.5	23.5	2.0	14.4
Des Moines	21.5	23.5	2.0	14.4
Keckuk	21.5	23.5	2.0	14.4
Sioux City	21.0	23.0	2.0	14.0
Duluth, Minn.	22.5	24.5	2.0	15.1
Minneapolis	22.2	24.2	2.0	15.1
La Cross, Wis.	22.2	24.2	2.0	14.9
Milwaukee	21.1	23.1	2.0	13.8
Madison	21.3	23.3	2.0	14.0
Detroit, Mich.	21.8	23.8	2.0	14.7
Grand Rapids	21.7	23.7	2.0	14.6
Saginaw	21.9	23.9	2.0	14.8
Evansville, Ind.	22.0	24.0	3.0	14.0
Ft. Wayne	22.4	24.4	3.0	14.4
Indianapolis	22.2	24.2	3.0	14.2
South Bend	22.4	24.4	3.0	14.4
Fargo, N. D.	23.9	25.9	2.0	17.1
Huron, S. D.	23.5	25.5	3.0	15.6
Sioux Falls	22.0	24.0	3.0	15.1
*K. C., Mo.	21.9	23.9	3.0	12.8
*Springfield	21.8	23.8	3.0	13.7
*St. Louis	20.6	22.9	2.5	13.5
*St. Joseph	21.0	23.0	2.5	13.4
‡Wichita, Kan.	19.8	21.8	2.0	13.3
Bartlesville, Ok.	20.8	22.8	3.0	13.3

*State tax is 2c. Remainder is city tax.
†Quantity price on more than 100 gallons, 18.0.
‡At all Kansas points a discount of 1 cent a gallon is allowed from the tank wagon postings on dumps of 50 gallons or more.

The following monthly rebate system is effective on tankwagon schedules throughout the territory of Standard Oil Co. of Indiana: Over 750 gallons, ½c; over 2,000 gallons, ¾c; over 3,000 gallons 1c; over 6,000 gallons, 1½c; over 10,000 gallons, 2c. If quantity bought during the year is equal to 12 times the monthly agreed purchases the discount will be paid or credited on the entire quantity less monthly payments. Service station customers will receive discount of 1 cent a gallon on purchases amounting to 200 gallons a month or 2,400 gallons a year; and 2 cents a gallon on 600 gallons a month or 7,200 gallons a year.

STANOLIND FURNACE OIL
(Standard Oil Co. of Indiana)

1 to 149 gallons	11.0
50 to 399 gallons	10.0
400 to 849 gallons	9.5
850 or more gallons	9.0

SOUTHWESTERN DISTRICT
***Magnolia Petroleum Co.**

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Dallas, Tex.	†21.0	21.0	1.0	14.0
Fort Worth	†21.0	21.0	1.0	14.0
Houston	†21.0	21.0	1.0	14.0
San Antonio	†19.0	19.0	1.0	14.0
El Paso	†22.0	22.0	1.0	15.0
Texarkana	†20.6	20.0	1.0	14.0
Muskogee, Ok.	20.0	23.0	3.0	13.0
Oklahoma City	20.0	23.0	3.0	13.0
Tulsa	20.0	23.0	3.0	13.0
Little Rock	21.0	24.0	4.0	15.5
Ft. Smith, Ark.	21.0	24.0	4.0	15.5

*The following is the schedule of discounts on quantity gasoline sales adopted by the Magnolia Petroleum Co. in Oklahoma: Over 750 gallons a month, ½c; over 2,000 gallons, ¾c; over 3,000 gallons 1c; over 4,500 gallons, 1¼c; over 6,000 gallons, 1½c; over 8,000 gallons, 1¾c; over 10,000 gallons, 2c. If the quantity bought during the year is 12 times the monthly agreed purchases, the discount will be paid or credited on the entire quantity for the year less any monthly purchases.

The schedule on service station deliveries is: Over 200 gallons a month, 1c; over 300 gallons a month, 1¼c; over 400 gallons, 1½c; over 500 gallons, 1¾c; over 600 gallons, 2c. The same rule applies for annual purchases as in the tankwagon discounts.

†Magnolia maintains only a retail schedule in Texas with dealers and large consumers allowed a flat 3-cent discount.

CENTRAL SOUTH DISTRICT
Standard Oil Co. (Louisiana)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
*New Orleans	20.5	23.5	3.0	15.0
Alexandria	20.0	23.0	2.0	16.0
Baton Rouge	19.0	22.0	2.0	14.5
LaFayette	20.0	23.0	2.0	15.5
Lake Charles	20.5	23.5	2.0	16.0
Shreveport, La.	19.0	22.0	2.0	15.0
Memphis, Tenn.	21.5	24.5	3.0	17.0
Chattanooga	23.5	26.5	3.0	17.5
Knoxville	23.5	26.5	3.0	18.0
Nashville	22.5	25.5	3.0	18.0
Bristol	24.0	27.0	3.0	17.5
Little Rock Ark	22.0	26.0	4.0	16.0

*Tax of 3c includes city tax of 1c.

SOUTHERN DISTRICT
Standard Oil Co. (Kentucky)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Atlanta, Ga.	25.0	28.0	3.5	19.0
Augusta	25.0	28.0	3.5	19.0
Macon	25.0	28.0	3.5	19.0
Savannah	23.0	25.0	3.5	17.0
Birm'ghm, Ala.	22.0	25.0	2.0	18.5
Mobile	21.0	24.0	2.0	17.0
Montgomery	23.0	26.0	3.0	19.5
Clarksdale, Miss	23.0	26.0	4.0	16.5
Jackson	23.0	26.0	4.0	16.5
Natchez	22.5	25.5	4.0	16.0
Vicksburg	22.5	25.5	4.0	16.0
Jack'ville, Fla.	23.0	26.0	4.0	17.0
Miami	25.0	28.0	4.0	18.5
Pensacola	23.0	26.0	4.0	17.5
Tampa	23.0	26.0	4.0	17.0
Covington	24.0	27.0	5.0	18.0
Louisville	25.0	28.0	5.0	17.0
Lexington, Ky.	25.0	28.0	5.0	18.0

In addition to the state tax of 2c on gasoline, Montgomery has city tax of 1c on gasoline and ½c on kerosene. Prices in Georgia include ½c inspection fee on gasoline and kerosene; in Florida, an inspection feet of 0.125c; in Alabama, an inspection feet of ½c on kerosene only.

ROCKY MOUNTAIN DISTRICT
Continental Oil Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Denver, Colo.	22.0	22.0	2.0	17.0
Pueblo	22.0	24.0	2.0	17.0
Casper, Wyo.	22.5	24.5	2.5	15.5
Cheyenne	23.5	25.5	2.5	17.5
Butte, Mont.	24.0	24.0	2.0	19.5
Helena	26.0	28.0	2.0	19.5
Salt Lake, Utah	26.0	28.0	5.5	18.5
Boise, Idaho	27.0	29.0	3.0	20.5
Albuquerque, N. Mex.	28.5	28.5	3.0	19.0

ATLANTIC COAST DISTRICT
Standard Oil Co. (New Jersey)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Atlantic City	19.0	....	...	16.0
Newark, N. J.	19.0	21.0	...	16.0
Annapolis, Md.	21.0	....	2.0	16.0
Baltimore	21.0	24.0	2.0	16.0
Cumberland	21.0	24.0	2.0	16.0
Washington	21.0	24.0	2.0	16.0
Danville, Va.	23.5	....	4.5	16.0
Norfolk	23.5	26.5	4.5	16.0
Petersburg	23.5	26.5	4.5	16.0
Roanoke	23.5	26.5	4.5	16.0
Richmond	23.5	26.5	4.5	16.0
Charleston, W. Va.	22.5	25.5	3.5	16.0
Keyser	22.5	....	3.5	16.0
Parkersburg	22.5	25.5	3.5	16.0
Wheeling	22.5	25.5	3.5	16.0
Charlotte, N. C.	23.5	26.5	4.0	16.0
Hickory	23.5	....	4.0	16.0
Mt. Airy	23.5	26.5	4.0	16.0
Salisbury	23.5	26.5	4.0	16.0
Charleston, S.C.	24.5	27.5	5.0	16.0
Columbia	24.5	27.5	5.0	16.0

NEW YORK AND PART OF NEW ENGLAND DISTRICT
Standard Oil Co. (New York)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Albany, N. Y.	21.0	....	...	17.0
*New York	21.0	....	...	17.0
Buffalo	20.0	....	...	17.0
Rochester	21.0	....	...	15.0
Syracuse	21.0	....	...	17.0
Boston, Mass.	21.0	....	...	17.0
Augusta, Me.	24.0	....	3.0	17.0
Manchester, N. H.	23.0	....	2.0	17.0
Burlington, Vt.	23.0	....	2.0	17.0

*Price in steel barrels.
Note: Standard Oil Co. of New York does not generally quote service station price in its territory. In most cases the service station price is 2 or 3 cents higher than tankwagon price.

PACIFIC COAST DISTRICT
Standard Oil Co. (California)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
San Francisco	18.0	22.0	2.0	15.5
Los Angeles	16.5	20.5	2.0	16.5
Fresno	18.5	22.5	2.0	17.5
Reno, Nev.	23.5	27.5	4.0	19.0
Portland, Ore.	19.0	23.0	3.0	16.5
Seattle, Wash.	18.0	22.0	2.0	16.5
Spokane	22.0	26.0	2.0	20.5
Tacoma	18.0	22.0	2.0	16.5
Phoenix, Ariz.	25.0	28.0	3.0	21.5

CALIFORNIA CRUDE PRICES
***Standard Oil Co.-Union Oil Co.**
(Effective March 11)

Gravity—	Long Beach Huntington Beach Richfield Brea-Olinda Rosecrans-Dom'gues Torrance-Inglewood	Whittier La Habra Montebello	Kern River Newhall-McKittrick Midway-Sunset Elk Hills Lost Hills Belridge	Coyote	Santa Fe Springs	Coalinga	Wheeler Ridge	Santa Maria Ventura Salt Lake
14°	.85	.85	.75	.85	....	.75	.75	.85
15°	.87	.85	.75	.85	....	.75	.75	.85
16°	.90	.85	.75	.85	....	.75	.75	.85
17°	.94	.85	.75	.85	....	.75	.75	.85
18°	.98	.86	.75	.86	....	.75	.75	.85
19°	1.04	.87	.75	.87	....	.75	.75	.85
20°	1.10	.89	.82	.90	.89	.79	.78	.90
21°	1.16	.91	.90	.98	.91	.86	.81	.97
22°	1.22	.94	1.00	1.06	.94	.93	.85	1.04
23°	1.28	.97	1.11	1.14	.97	1.00	.89	1.11
24°	1.34	1.01	1.22	1.22	1.02	1.07	.93	1.18
25°	1.40	1.05	1.33	1.30	1.08	1.14	.97	1.25
26°	1.46	1.09	1.44	1.38	1.16	1.21	1.01	1.32
27°	1.52	1.13	1.55	1.46	1.24	1.28	1.05	1.39
28°	1.58	1.17	1.66	1.54	1.32	1.35	....	1.46
29°	1.64	1.21	1.77	1.62	1.40	1.42	....	1.53
30°	1.70	1.25	1.88	1.70	1.48	1.49	....	1.60
31°	1.76	....	1.99	....	1.60	1.56	....	1.67
32°	1.84	....	2.10	....	1.72	1.63	....	1.73
33°	1.92	....	2.21	....	1.84	1.70	....	1.79
34°	2.00	....	2.32	....	1.96	1.77	....	1.85
35°	2.08	....	....	....	2.08	1.84	....	1.92
36°	2.16	....	....	....	2.16	....	....	....
37°	2.24	....	....	....	2.24	....	....	....
38°	2.34	....	....	....	2.34	....	....	....
39°	2.44	....	....	....	2.44	....	....	....
40°	2.54	....	....	....	....	....	....	....
41°	2.64	....	....	....	....	....	....	....
42°	2.74	....	....	....	....	....	....	....

*Column 2—Long Beach and Huntington Beach crudes, 14 to 32 degrees, inclusive; Richfield and Brea-Olinda, 14 to 30 degrees; Torrance and Inglewood, 14 to 28; Dominguez, 24 to 42 degrees. Rosecrans crude ranges from 14 to 42 degrees, but only Union Oil Co. posts below 24 degrees.
Column 3—Whittier and La Habra crudes, 14 to 22 degrees; Montebello, 14 to 30 degrees.
Column 4—Kern River, Newhall and McKittrick, 14 to 19 degrees; Midway-Sunset and Elk Hills, 14 to 33 degrees; Lost Hills and Belridge, 14 to 34 degrees.
Column 6—Santa Fe Springs. Only Union Oil Co. posts below 24 degrees.
Column 9—Salt Lake, 14 to 19 degrees, inclusive; Santa Maria, 14 to 30 degrees; Ventura, 14 to 36 degrees. Posted only by Union Oil Co.

PENNSYLVANIA-DELAWARE AND PART NEW ENGLAND
Atlantic Refining Co.

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
*Pittsburgh, Pa.	20.0	25.0	...	17.0
*Philadelphia	20.0	25.0	...	17.0
*Scranton	20.0	25.0	...	17.0
*Allentown	20.0	25.0	...	17.0
Altoona	20.0	25.0	...	17.0
*Erie	20.0	25.0	...	17.0
Dover, Del.	22.0	25.0	2.0	17.0
Wilmington	22.0	25.0	2.0	17.0
Springf'd, Mass.	21.0	23.0	...	17.0
Worcester	21.0	24.0	...	17.0
Boston	21.0	24.0	...	17.0
Providence, R.I.	22.0	24.0	1.0	17.0
Hartford, Conn.	23.0	26.0	2.0	17.0
New Haven	23.0	26.0	2.0	17.0

*Pennsylvania tax of 2c is collected by the dealer and paid by him direct to the State.

NEBRASKA
Standard Oil Co. (Nebraska)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
Omaha	21.25	23.25	2.0	14.0
McCook	22.75	24.75	2.0	15.5
Norfolk	21.75	23.75	2.0	14.5
N. Platte	22.75	24.75	2.0	15.31
Scottsbluff	22.25	24.25	2.0	14.75

OHIO
Standard Oil Co. (Ohio)

	Gasoline: Tank wagon	Gasoline: Service station	Gasoline: Incids tax of	Kero. Tank wagon
All Ohio points	22.0	24.0	2.0	16.0

CRUDE PRICE CHANGES

August 1.—Plains Pipe Line Co. reduced all grades of Panhandle, Tex., crude 25 cents.

August 9.—Gulf Refining reduced Spindletop, Tex., crude 35 cents. Reduction met by other major purchasing companies.

OIL SHALE RESURVEY IN DE BEQUE DISTRICT

By Charles E. Kern
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Aug. 9.—The resurvey of the valuable oil shale lands in the De Beque district of Colorado is being prosecuted energetically with a view to meeting the great demand for resurveys in this district, according to the General Land Office.

Eight townships have been completed in the field. It is anticipated that returns of these resurveys will all be officially filed within a comparatively short time.

"The areas covered by these resurveys and also adjoining areas already grouped for resurveying during the current year," a General Land Office statement says, "are covered in large part by oil shale placer locations made before the date of the leasing act of February 25, 1920. These locations had not, for the most part reached the status of entries and therefore were not of record in this office at the time of withdrawal for resurvey.

"In order that the placer locations in Groups 161 and 162 might receive protection and identification in terms of the original survey, this office consented to confer upon them the status of entered lands for the purpose of the resurvey only. This procedure was undertaken merely as a concession to the claimants in order to provide acceptable descriptions for these claims."

NEW DISTRICT MANAGER

Due to the resignation of E. J. Nordstrom, formerly district manager in charge of the Dallas, Tex., office of the Superior Tube Co., that concern has appointed to the same position Ralph D. Burnham, who has taken charge of the Texas division.

Mr. Burnham was for a number of years with the Interstate Pipe Co., and subsequently with the Coatesville Boiler Works and in his present capacity he will have charge of sales in Texas, Louisiana and Arkansas for the Superior Tube Co. Mr. Burnham is well known in the territory mentioned and is wholly familiar, by reason of his past experience, with the Superior's line of goods.

XUM

WAR *on* WASTE!

THE Sinclair Law of Lubrication is a valued sales help to the Sinclair dealer in building his business. He is not merely selling "oil"—he is selling correct lubrication and economical transportation. He is increasing his gallonage by doing a worthwhile part in the "War on Waste"—that waste of expensive machinery which is caused by faulty lubrication.

SINCLAIR REFINING COMPANY
45 Nassau Street, New York

Atlanta Detroit Kansas City Chicago Houston Omaha

1916-26—Ten years of manufacturing and distributing petroleum products of quality

The SINCLAIR LAW *of* LUBRICATION

For every machine
of every degree
of wear *there is*
a scientific
SINCLAIR OIL
to suit *its* speed
and seal *its* power

SINCLAIR OILS
REG. U.S. PAT. OFF.

SINCLAIR **OPALINE** MOTOR OIL
REG. U. S. PAT. OFF.

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CANADIAN FIELDS

(Continued from Page 127)

ture near Drumheller, on which development work will be commenced this fall. No. 1 will be drilled in Township 28-18w4, on the northwest bank of the Red Deer River, approximately 12 miles southeast of Drumheller. The structure is a prairie fold outside the foothill belt; and it is expected that production will be reached in 3,000 feet of drilling. Numerous shallow gas showings have been met in water wells drilled in the Red Deer Valley. J. E. Jennings, of Toronto, will have charge of the development work. The Hudson's Bay Co. holds Sections 8 and 26 in the area filed on by the Chicago interests.

In northern Alberta, Western Provinces Oil Co. of Saskatoon, Sask, has resumed work on the Victory well, Section 32-83-21-w5, at Peace River. The crew, under George F. Stafford, head driller, has finished underreaming to carry the 10-inch casing to the bottom of the well at 1,542 feet, and the crews are now engaged in cementing the 10-inch and 14-inch strings. In this well gas and oil were struck between 1,530 and 1,540 feet.

In Saskatchewan, the Unity Valley Oil Co., SE, Section 23-41-24w3, is reported drilling at 1,115 feet. A combination rotary and standard outfit is being used, and a gas production, estimated around 500,000 feet a day, was encountered in the upper horizons.

Vancouver Oil & Refining Co. has finished construction of a new plant at Vancouver, B. C. Construction was in charge of O. E. Woods.

In the Foremost Field, southern Alberta, Canadian Western Natural Gas Co.'s No. 7, has got the gas sand with an estimated production of 3,500,000 feet, which is considerably less than was expected. The well will be connected with the Canadian Western pipeline to Calgary.

FIRST LOCATIONS IN NORTH AND WEST TEXAS

(Continued from Page 92)

SW. cor. League 154, Sherman County school land.

Hockley County

Ricker and Dodson's No. 1 Ellwood, 320 feet north and east SW cor. Section 55, Block A, R. M. Thompson Survey.

Baylor County

J. W. Hooser's No. 15, W. B. Mills, 450 feet south and 1,066 feet west NE cor. SE, Section 2,428, T. E. & L. Survey.

Archer County

American Refining Co. and others' No. 2 J. H. Hurbeville, 1,607 feet south and 150 feet west NE cor. of Section 150, Robert Carson Survey A-85. Bridwell & Heydrick's No. 4 T. B. Wilson, 150 feet south and 735 feet west of NE cor. of north 40 acres, south 120 acres, west 276 acres, Section 12, Block 3, H. & T. C. Survey, A-1243. G. J. Brown's No. 2 J. J. Perkins and others, 660 feet north and 450 feet east SW cor. SW, Section 14, League 3, Denton County school land, A-117. Empire Gas & Fuel Co.'s No. 2 J. R. Parkey, 1,470 feet south and east NE cor. Section 2, S. P. & R. R., A-1,233. Texhoma & Maer's No. 1 Kemp & Kemper, 150 feet south and west NE cor. SW, Block 63, Kemp's Wichita Valley lands. Atlantic Oil Production Co's No. 5 S. E. Oldham, 150 feet north and 450 feet west NE cor. of 40-acre lease out of the E. Hubble Survey, A-1,128. M. & V. Oil Co.'s No. 9 A. M. Kunkel, 450 feet north and 150 feet west SE cor. of 40-acre lease out of B. B. B. & Co. Survey, No. 2, A-51. Pandem Oil Corp.'s No. 6 W. H. Thomas, 750 feet south and 150 feet east NW cor. S, Lot 5, north subdivision of the N. Thomas Survey, A-454. Plains Production Co.'s No. 1 J. H. Turbeville, 150 feet south and east NW cor. west 27.5 acres, east 63.8 acres, south 120.5 acres, Section 35, Club Ranch subdivision.

Clay County

W. J. Green Oil Corp. and others' No. 1 Mrs. R. Bunting, 150 feet south and west NE cor. SW, Section 2608, T. E. & L. Survey. Western Oil Corp. and others' No. 1 Luther Wright, 150 feet north and east SW cor. NE, Section 2632, T. E. & L. Survey.

Montague Survey

Newblock Oil Co.'s No. 4 J. W. Maddox, 1,283 feet north and 1,208 feet east SW cor. of J. W. Maddox 191-acre tract out of John Chambliss Survey, A-123. Texhoma Oil & Refining Co.'s No. 4 J. W. Rowland, 150 feet north and 2,076 feet west SE cor. of 71-acre lease out of John Chambliss Survey, A-123.

Collin County

Verona Production Co.'s No. 1 John Watkins, 3,981 feet south and 1,998 feet east NE cor. of James Jackson Survey, being 450 feet south and 150 feet east NW cor. of J. Watkins 50 acre tract.

Jack County

Hester, Hawkins & Staley's No. 2 Mrs. M. D. Snedeker, 150 feet south and 450 feet west NE cor. south 20 acres of Lot 7, J. Robbins Survey, A-490; No. 3 Mrs. M. D. Snedeker, 150 feet south and 750 feet west NE cor. south 20 acres of Lot 7, J. Robbins Survey, A-490.

Young County

Burton & Texhoma's No. 3 S. M. J. Benson, 310 feet south and 150 feet west NE cor. east 33 acres, west 66 acres, south 132.25 acres, Section 1450, T. E. & L. Survey. A. W. Johnson's No. 1 S. M. J. Benson, 450 feet south and 150 feet east NE cor. east 66.2 acres, south 132.25 acres, Section 1450, T. E. & L. Survey. Magnolia Petroleum Co.'s No. 6 L. C. Little and others, 1,650 feet south and 150 feet west NE cor. of 100-acre lease out of the I. Holman Survey, A-130. Nash & Windfohr's No. 2 R. L. Watson, 750 feet north and 150 feet west SE cor. NW, Section 22, Young County school land, A-1284. C. L. Peeler and others' No. 1 M. H. Hankins, 150 feet south and west NE cor. of the west 20 acres, north 40 acres, SE, Section 200, T. E. & L. Survey. Reed and others' No. 4 J. W. Jack, 460 feet north and 150 feet east SW cor. Section 23, Young County school land, A-1284. Robert Oil Co.'s No. 10 E. Rogers, 1,800 feet north and 2,400 feet west SE cor. Section 166, T. E. & L. Survey. Simms Oil Co.'s No. 1 T. J. Routon, 2,337 feet south and 150 feet west of NE cor. east 80 acres, north 240 acres, Section 181, T. E. & L. Survey. The Texas Company's No. 1 Graham Stewart, 2,155 feet south and 1,561 feet west NE cor. David Dawson Survey, A-76. Tidal Oil Co. and others' No. 6 S. M. J. Benson-A, 150 feet north and 750 feet east SW cor. east 99.37 acres, north 132.37 acres, Section 1450, T. E. & L. Survey.

Shackelford County

Gwinnup and others' No. 1 J. C. Chapman, 660 feet north and west SE cor. NW cor. of Section 44, Block 11, T. & P. Survey, Jackson and others' No. 2 G. Flippen, 800 feet north and 1,440 feet west SE cor. Section 41, Block 11, T. & P. Survey.

Logan and others' No. 1 John Snugg, 660 feet north and west SE cor. Section 177, B. B. B. & C. Survey. Merry Brothers & Perrini's No. 2 W. P. Newell, 150 feet north and 2,490 feet west NE cor. Section 2, Block 12, T. & P. and located in Section 3, G. H. & H. Survey. Milham Corp.'s No. 2 J. F. Sedwick, 330 feet north and 950 feet east SW cor. NE Section 1561, T. E. & L. Survey; No. 2 D. G. Simpson, 1,050 feet south and 950 feet west NE cor. Section 14, Blind Asylum land. Robert Oil Corp.'s No. 1 J. B Matthews, 150 feet north and 1,756 feet east SW cor. Section 4, Block 10, E. T. & R. R. Survey. Roeser & Pendleton's No. 2 W. I. Cook-B, Section 60, 150 feet south and 50 feet east NW cor. NW NW. Section 60, Block 10, E. T. & R. R. Survey; No. 3 W. I. Cook-B, 685 feet south and 50 feet east NW cor. Section 60, Block 10, E. T. R. R. Survey; No. 4 W. I. Cook-B, 150 feet north and 50 feet east SW cor. NW NW. Section 60, Block 10, E. T. R. R. Survey; No. 1 W. I. Cook-B, Section 61, 150 feet north and 50 feet east SW cor. SW SW. Section 61, Block 10, E. T. R. R. Survey; No. 2 W. I. Cook-B, 685 feet north and 50 feet east SW cor. Section 61, Block 10, E. T. R. R. Survey; No. 13, W. I. Cook-A, Section 84, 150 feet south and west NE cor. NW SE, Section 84, Block 10, E. T. R. R. Survey; No. 8 W. I. Cook-B, Section 84, 683 feet north and 250 feet east SW cor. SE SE, Section 84, Block 10, E. T. R. R. Survey. Skelly Oil Co.'s No. 1 J. B. Matthews, 150 feet south and west NE cor. NW SE Section 31, Block 10, E. T. R. R. Survey. Zeigler & Fentreiss' No. 1 L. K. Austin, 150 feet north and west SE cor. NE SE, Section 16, Block 3, H. & T. C. Survey.

Eastland County

Eastland Oil Co.'s No. 3 P. G. Wright, 1,350 feet NW of SE cor., Section 54, League 3 and 4, McLennon County school land and 180 feet south of north line of P. G. Wright 40 acre tract. Evans and others' No. 1 J. R. Higgins' 150 feet south and 1,400 feet east NW cor. north 100 acres, Section 43, League 3 and 4 McLennon County school land. Hart Brothers' No. 1 W. F. Davenport, 200 feet north of center of south line, Section 65, League 3 and 4, McLennon County school land. Magnolia Petroleum Co.'s No. 1 E. A. Thurman, 1,500 feet south of north line and 300 feet west of east line of E. Thurman tract out of Smelzer Survey. Mook Texas Oil Co.'s No. 2 U. Casey, 375 feet south and 900 feet west of most southerly NE cor. of the U. Casey 253-acre tract out of William Van Norman Survey. Lewis & Moore's No. 1 Jesse Harbin, 150 feet south and 1,352 feet east NW cor. Jesse Harbin 122-acre tract out of the north Section 27, Block 2, H. & T. C. Survey. Lightfoot and others' No. 1 H. C. Earnest, 450 feet north and east of SW cor. NW Section 3, Block 4, H. & T. C. Survey. Brownfield & Morrow's No. 1 J. M. Roach, 150 feet north and east SW cor. north 100 acres of SE Section 12, B. B. B. & C. Survey. Chestnut & Smith's No. 1 J. L. Noble, 300 feet south and 375 feet east NW cor. W NW, Section 8, Block 3, H. & T. C. Survey. Humble Oil & Refining Co.'s No. 1 J. R. Dill, 900 feet north and 330 feet east SW cor. NE, Section 14, Block 2, E T. R. R. Survey. Ross & Frost's No. 1 H. F. Falk, 150 feet south and east NW cor. SW SE, Section 37, Block 2, E. T. R. R. Survey. Thomas & Reynolds' No. 1 R. H. B. McAllister, 250 feet south and west NE cor. SE, Section 16, Block 3, H. & T. C. Survey.

Callahan County

Amerada Petroleum Corp.'s No. 3 M. L. Long, midway north and south and 150 feet east of west line N. M. L. Long 37.5-acre tract out of W. G. Anderson Survey. Brown & Co.'s No. 3 M. L. Long, 150 feet north and east SW cor. S. M. L. Long 37.5-acre tract out of W. G. Anderson Survey. Cranfill and Reynold's No. 2 E. E. Henderson, 450 feet south and 150 feet west NE cor. of E. E. Henderson 80-acre tract out of Section 73, Comal County school land; No. 3 E. E. Henderson, 150 feet south and 450 feet west NE cor. E. E. Henderson 80-acre tract out of Section 73, Comal County school land. J. S. Cosden and others' No. 1 Ramsey & Estes, 300 feet north and 520 feet west SE cor. Anderson Survey. Empire Gas & Fuel Co.'s No. 1 Mary Johnson, 330 feet south and west NE cor. Section 146, G. H. & H. Survey. Humble Oil & Refining Co.'s No. 1 W. B. Irvin, 660 feet south and 645 feet west NE cor. W. B. Irvin 100-acre tract out of J. Dyson Survey No. 751. C. O. Moore and others' No. 1 Walker & Caldwell, 4,010 feet north and 2,640 feet east SW cor. E. S. Heath Survey, No. 796; No. 1 Walker & Caldwell-A, 1,914 feet south and 4,204 feet east NE cor. G. Clink Survey; No. 1 Walker & Caldwell-B, 1,980 feet due south of NE cor. and located on east line Section 20, Block 5, S. P. R. R. Survey. Prairie Oil & Gas Co.'s No. 5 R. Cunningham, 150 feet north and 450 feet west SE cor. north Section 73, Comal County school land. Sanger Oil Co.'s No. 1 C. Ferguson, 3,700 feet north and 1,700 feet east SW cor. Section 52, Lunatic Asylum land. E. R. Williams' No. 1 J. C. Paum, 150 feet north and west SW cor. west 74 acres of south Section 90, Comal County school land.

Taylor County

City of Abilene's No. 1 City of Abilene, 1,240 feet north and 2,340 feet west SE cor. Section 66, Lunatic Asylum land. Sanger Oil & Refining Co.'s No. 2 R. H. Anderson, 300 feet north and 150 feet east SW cor. SE, Section 8, Lunatic Asylum lands; No. 1 J. F. Gillespie, 900 feet north and 1,020 feet east SW cor., Section 7, Lunatic Asylum lands.

Nolan County

Hucony Gas Co.'s No. 1 Arthur Sears, 1,980 feet north and 1,320 feet east SW cor. Henry J. Stockman Survey, No. 291.

Mitchell County

Atlantic Oil Production Co.'s No. 6 W. R. Womack, 1,650 feet north and 330 feet west SE cor. Section 11, T-I-N, Block 28, T. & P. Survey; No. 7 W. R. Womack, 330 feet north and west of SE corner, Section 11, Block 28, T-I-N, T. & P. Survey. Magnolia Petroleum Co.'s No. 6 O. M. Adams, 2,310 feet north and 1,650 feet east SW cor. Section 11, T-I-N, Block 28, T. & P. Survey; No. 2 Frances Adams, 2,310 feet south and 1,650 feet east NW cor. Section 11, T-I-N, Block 28, T. & P. Survey; No 3 Mary Foster, 330 feet north and 2,310 feet west SE cor. Section 17, T-I-S, Block 29, T. & P. Survey. E. P. Zoch and others' No. 1 J. J. Ford, at the center of the SW Section 138, Block 3, H. & G. N. Survey.

Howard County

Magnolia Petroleum Co.'s No. 1 Mary Chalk, 330 feet south and west NE cor. Section 124, Block 29, W & N. W. Survey; No. 3 Otis Chalk, 330 feet north and east of SW cor. Section 114, Block 29, W. & N. W. Survey.

Culberson County

James H. Garner and others' No. 1 Radford Grocery Co., at the center of SE, Section 29, Block 62, school land.

Coleman County

Bradstreet and others' No. 1 G. W. Teagle, 1,980 feet north and 660 feet west SE cor. Section 53, H. T. & B. Survey.

Brown County

Amerada Petroleum Corp's No. 1 M. E. Fry, 2,050 feet north and 1,121 feet west SE cor. M. E. Fry 321-acre tract out of the John Chambliss Survey, No. 621. Blackstone Oil Co.'s No. 1 W. T. Jones, 150 feet north and west SE cor. W. T. Jones 89-acre tract out of the J. E. Stacy Survey, A-1577. Curry & Moore's No. 3 W. M. Wooldridge, 450 feet south and 150 feet east NW cor. of 30 acre lease out of E. T. R. R. Survey, No. 157, A-297. Gunn Production Co.'s No. 8 R. G. Gunn, 450 feet south and 1,340 feet east NW cor. R. G. Gunn 100-acre tract out of the W. B. Smith Survey, No. 155; No. 9 R. G. Gunn, 150 feet north and 190 feet west NE cor. J. F. Pickett 150-acre tract out of the E. T. R. R. Survey, No. 158 and located in the W. B. Smith Survey, No. 155. Humble Oil & Refining Co.'s No. 1 M. E. Fry, 2,202 feet north and 910 feet west SE cor. M. E Fry 321-acre tract out of the J. Chaudion Survey, No. 621; No. 2 M. E. Fry, 2,202 feet north and 530 feet west SE cor. M. E. Fry 321-acre tract out of Jesse Chaudion Survey No. 621. No. 1 W. M. Wooldridge, 150 feet south and west of NE cor. of 70-acre lease out of the E. T. R. R. Survey, No. 151, A-297. Louisiana Oil & Refining Co.'s No. H. H. Henslee, 150 feet south and 856 feet west NE cor. of H. H. Henslee 120-acre tract out of the P. Curlong Survey, No. 151. Magnolia Petroleum Co.'s No. 1 M. E. Fry, 150 feet south and west NE cor. of the west 80 acres, south 330 acres, east 331 acres J. Chaudion Survey, No. 621. Mendenhall and others' No. 12 J. W. Newton, 400 feet north and 1,000 feet east SW cor. of 80-acre lease out of the William Miller Survey, No. 149. C O. Moore and others' No. 1 W. B. Brannum, 150 feet north and east of the SW cor. W. B. Brannum 150-acre tract out of the J. F. Hesser Survey, A-520. McKenna and others' No. 6 J. I. Foster, 750 feet north and 150 feet west SE cor. of 40-acre lease out of the T. Benson Survey, No. 783; No. 7 J. I. Foster, 1,050 feet north and 150 feet west SE

cor. of 40-acre lease out of the T. Benson Survey, No. 783; No. 8 J. I. Foster 1,350 feet north and 150 feet west SE cor. of 40-acre lease out of the T. Benson Survey, No. 783; No. 9 J. I. Foster, 150 feet south and west of NE cor. of 40-acre lease out of the T. Benson Survey, No. 783. McLester Oil Co.'s No. 6 J. Wooldridge, 1,100 feet south and 200 feet east, NW cor. east 96 acres of J. Wooldridge 160-acre tract out of the H. B. Gaines Survey, A-1400; No. 7 J. Wooldridge, 1,160 feet south and 500 feet east NW cor. east 96 acres of J. Wooldridge 160-acre tract out of the H. B. Gaines Survey, A-1400; No. 7 W. M. Wooldridge, 150 f et north and west of the most southerly SE cor. of their 90-acre lease out of the E. T. R. R. Survey, No. 159, A-297. McLester Oil Co.'s No. 2 M. E. Fry, 1,698 feet north and 911 feet west SE cor. of M. E. Fry 321-acre tract out of the J. Chaudoin Survey, No. 621; No. 3 M. E. Fry, 1,989 feet north and 530 feet west SE cor. of M. E. Fry 321-acre tract out of the J. Chaudoin Survey, No. 621. J. S. Pool and others' No. 1 J. W. Newton, 150 feet south and 550 feet west NE cor. of SW 20 acres of the J. W. Newton 361-acre tract out of the R. Mitchell Survey, No. 141.

Prairie Oil & Gas Co.'s No. 2 J. F. Pickett, 150 feet south and 470 feet west of NE cor. J. F. Pickett 160-acre tract out of the W. A. Foster Survey, A-1,670. E. L. Smith Oil Co.'s No. 1 J. C. Mullins, 300 feet south and 125 feet east NE cor. J. C. Mullins tract out of the J. C. Mullins Survey No. 67. The Texas Company's No. 2 W. S. Johnson, 463 feet north and 150 feet east of the SW cor. east 55 acres, west 80 acres of the W. S. Johnson Survey, A-1,420. Valley Oil Co.'s No. 3 A. B. Teston, 450 feet north and 150 feet east SW cor. A. B. Teston 50-acre tract out of the P. Curlong Survey, No. 151. West & H-Y Oil Co.'s No. 9 J. W. Newton, 160 feet south and 910 feet east of the NW cor. J. W. Newton 36.1-acre tract and out of the Robert Mitchell Survey No. 141; No. 10 J. W. Newton, 1,420 feet south and 910 feet east NW cor. J. W. Newton 361-acre tract out of the Robert Mitchell Survey, No. 141; No. 11 J. W. Newton, 620 feet south and 910 feet east of the NW cor. J. W. Newton 361-acre tract out of the R. Mitchell Survey No. 141.

Barnsdall Oil Corp.'s No. 1 J. T. Spark, 533 feet south and 1,738 feet east NW cor. of Lot 69, George W. Petty Survey, No. 17.

Comanche County

Caddell & Davis' No. 1 O. W. Gasper, 330 feet south and west, NE cor. NW, Section 43, Block 2, H. & T. C. Survey. Texas Pacific Coal & Oil Co.'s No. 1 Frank Kirk, 1,375 feet north and 1,100 feet east, SW cor. NW, Section 21, D. & D. A. L. Survey.

Upton County

W. H. Dunning, Jr.'s No. 1 Crier-McElroy, 330 feet north and east, SW cor. NW, Section 198, Block F, C. C. S. D. & R. G. N. G. Survey. Independent Oil & Gas Co.'s No. 2 A. S. Burleson, 330 feet south and east, NW cor., west 160 acres, north 480 acres, east 1,120 acres of the Thomas C. Jones Survey, No. 100, A-176; No. 3 A. S. Burleson, 330 feet north and west, SE cor. of 160 acre lease out of the Thomas C. Jones Survey, No. 100, A-746; No. 8 L. Taylor, 250 feet SW of the most easterly SW cor. of Julia Prather Survey No. 2, A-969, thence 205 feet SW of NE line of S. T. Sapp Survey No. 6. Marland Oil Co.'s No. 12 Sanger Brothers, 375 feet south and 450 feet east of SW cor. Section 18, Block 3, M. K. & T. thence south 470 feet and west 625 feet, and located in the J. H. King Survey, No. 1, A-1,033; No. 20 A. S. Burleson, 330 feet south and 1,945 feet west, NE cor. of 480-acre lease out of the Section 100, Thomas C. Jones Survey, A-746. McMan Oil Co.'s No. 1 Mrs. M. L. Baker, 330 feet north and west, SE cor. Section 8, Mrs. E. C. Groom Survey, A-790. Texas Pacific Coal & Oil Co.'s No. 2 Milton Shirk, 330 feet north and east of SW cor. SW, Section 5, Block 3, M. K. T. Survey.

Crane County

Independent Oil & Gas Co.'s No. 1 E. S. Hughes, 330 feet south and west of NE cor. W NE, Section 86, Block X, C. C. S. D. & R. G. N. G. R. R. Co. Survey.

J. K. Hughes' No. 1 L. P. Powell-B, 150 feet south and west of NE cor. south 80 acres, W half, Section 63, Block BB, G. C. & S. F. Survey. Republic Production Co.'s No. 1 L. P. Powell, 200 feet south and west NE cor. west 30 acres of north 80 acres of E half, Section 62, Block BB, G. C. & S. F. Survey.

SAN JUAN FIELD

(Continued from Page 40)

erating on the Glade structure about 6 miles northeast of Farmington, Section 24-30-13, are still closed down awaiting the arrival of a set of jacks that will lift a string of tools that were frozen in the hole.

Buys Miley Interests

R. M. Smith, who first came in here as a scout for the E. J. Miley interests, is reported to have purchased the entire Miley interests in the Bloomfield Oil & Gas Co. and has associated with him California capital that will enable him to put down two deep test wells in the Bloomfield district. Two standard rigs are being moved in for that purpose and it is stated that contracts will be signed up in Farmington this week that will start operations at once.

The Congress Oil Co., operating on the Kutz Canon district, Section 34-29-11, is still closed down awaiting the arrival of casing to shut out the gas so drilling can be resumed.

A group of Florida and Oklahoma men, operating under the firm name of the "Aztec Petroleum Co.", have started operations on the McCoy tract just north of the town of Aztec under a contract that requires them to go 2,500 feet if oil in commercial quantity is not encountered before that depth is reached. Five of the officers of the company were on the ground last week to watch the drill start.

The Union Oil & Mining Co., operating in the Blanco district, Section 8-29-9, struck a flow of artesian water at about 1,000 feet and is underreaming and lowering the casing to shut it off. This is the third heavy flow of water that has been encountered in this well all of which has been artesian. The last water is highly impregnated with gypsum.

The Continental-Santa Fe Companies, operating on the Rattlesnake structure, 30 miles west of Farmington, Section 2-29-19, drilling on the deep test well No. 17, have made a slow progress during the week being delayed by cavings in the Red Bed formation. Underreaming and lowering of casing follows a short period of drilling until the caving danger has been overcome. No. 19 on this structure has reached a depth of about 600 feet and is still drilling. The new gas and refining plant that is being installed on this structure for the purpose of extracting the gasoline out of the gas and then pumping it back into the oil bearing sand to increase production, is practically completed and is being tested out.

The Continental Oil Co., operating on the Table Mesa structure 25 miles southwest of Farmington, Section 3-27-17, drilling on No. 8 is straightening hole at a depth of 660 feet. This is the second time they have had trouble with a crooked hole in this well the first time the hole was abandoned and the rig skidded over and a new hole started. Drilling on No. 9 on this structure had reached a depth of 1,055 feet at the last report.

The operations of the Ute Consolidated Oil Corp., both on the Mancos structure and the Ute pasture, is closed down awaiting the decision of a meeting of stockholders held at Gallup this week.

OIL AND OUR FUTURE SOURCES OF ENERGY

(Continued from Page 31)

still an important producer, but the demand for oil is growing at such an alarming rate that we are already using about as much in every year as the entire state of Pennsylvania has produced in 67 years.

The following table is interesting and I think should be a warning to everybody of the rapidity with which we are consuming our petroleum deposits:

State—	Total Prod. to date Barrels	At our present rate of consumption this entire Prod. would have been used in less than
Pennsylvania	780,318,000	13 Months
Ohio	506,529,000	9 Months
Illinois	357,157,000	6 Months
West Virginia	338,179,000	6 Months
Indiana	112,246,000	2 Months
New York	59,808,000	1 Month
Total	2,154,237,000	35 Months

Those who represent we have enough petroleum to supply all our needs for even the next few years, and so long as we endeavor to work under our present system, are basing their representations on mere assertion and not on facts. Many of those who claim we have an abundance of petroleum do so only to prevent our government from taking action to enforce conservation and to prevent waste. They claim if our supply of petroleum fails us we can substitute oil produced from coal or from shale. It is true that some oil can be produced from both coal and shale, but those who talk the most glibly about it instill no confidence in any thoughful person that they appreciate the magnitude of the problem they are talking about or the practicability of what they recommend.

Predicts Long Shortage

From the standpoint of National Defence there is no substitute for petroleum. Taking our figures from those who represent that shale oil can be regarded as a substitute for petroleum, we find we would have to mine and treat 1,000 tons of shale to produce enough oil to drive one of our modern warships at full speed for a single hour. Oil from either coal or shale as a fuel for our navy is out of the question, as it would require so much man power as to reduce rather than enhance our war efficiency.

Even assuming that the production of oil from shale or coal can be made thoroughly practical, there is still no warrant to speak of them as substitutes for petroleum. It is doubtful whether there remains sufficient time to develop these processes before a shortage of petroleum overtakes us even if we were to at once go to work on the problem. But regardless of how much time is required to develop the necessary processes, and even if there yet remains ample time after they are developed, it is idle to think that anybody will supply the necessary plants in anticipation of a shortage and have these plants ready for production in event of shortage of oil. The truth of the matter is, that oil from shale or coal will only be brought into the market after we have experienced a long shortage in natural petroleum and then only after the permanency of this shortage of natural petroleum seems assured.

We not only need energy for power purposes but more preponderantly for various uses as heat. According to government statistics we are now using about 200,000,000,000 horsepower hours of which only 15 per cent is generated by water. According to other government statistics we have enough water power to generate power in excess of all of our present needs.

Of the coal mined and used each year that is capable of yielding valuable by-products, only a little more than 10 per cent of it is subjected to distillation and the balance is burned in a raw state.

Of the coal that is distilled for its by-products only a little more than 5 per cent is recovered as liquid hydrocarbon products and most of this, due to overheating, has been cracked up into products of but little value. It is possible to produce more than three times this quantity of liquid products and to subject them to less destructive distillation, thereby giving them a greater value, but as yet this low temperature carbonization, as it is called, has not been developed on a commercially economically scale.

Artificial Gas

The standards still in use which fix the character of our artificial gas, require us to supply a gas containing illuminations is of miscroscopical proportions and where it is so used the illumination should be secured by the use of incandescent gas lamps. Every year large quantities of petroleum oil and the bituminous constituent of coal are used to supply the enrichment to artificial gas. An unenriched gas would be just as valuable as an enriched gas, and in fact for most purposes a given amount of energy in the form of unenriched gas is more valuable than the equivalent energy in the form of enriched gas. Just to make this simple fact understood and thereby make it unnecessary to continue to supply an enriched gas would be an important contribution to the welfare of the nation. A recent report states that if all of the coal mined in 1924 had been processed for liquid products it would have produced only 3 per cent of the motor fuel required that year and yet coal distilled at temperatures which will not subject the liquid products to undue cracking is looked upon by many as our most available source of a supplementary supply of our needs for oil in event of a shortage of petroleum. The products produced by the distillation of coal are so numerous and varied that it is impossible to describe them here, but the low temperature products add greatly to what are already produced.

Much of our coal contains sulphur in such large quantities that it cannot be used for some purposes. Gas can be made from coal containing large amounts of sulphur and yet the sulphur can be removed from the gas without much expense. It is sufficiently within the range of possibility that this sulphur might become an asset rather than a liability and perhaps some business concerns could be found that would be willing to allocate research funds to this problem if its possibilities were clearly pointed out.

Power and Heat

If the coal we burn to heat our homes and our buildings was used to produce power and this power in turn was applied as in a refrigerating machine with the high temperature end within the house a great saving would result in the amount of coal we would use. This application of fuel is known as Lord Kelvin's warming machine.

By the wet grinding of coal to a fine power it can be separated from its ash by oil flotation as carried out in the Trent process, and this should make coal deposits available that have heretofore been unusable.

During the past few decades there has been such remarkable progress made in so many sciences and this progress has resulted in such remarkable applications that the public can easily be made to believe there are no restrictions on what we may yet expect. The public is credulous to the point of being in a ripe condition to be duped by any one who has any reason for doing so. In spite, however, of all this manifestation of progress, I recall no important scientific law or rule, of any branch of science, that has been proved to be wrong. Not only is this true, but very much of our enormous advance in producing things we have never produced before has been based on nothing new and has added nothing new to our basic knowledge of the sciences. Our scientific knowledge would have enabled us to have built the flying machine 50 years ago had we had proper materials and a light enough engine.

In spite of all this, any imitation scientist with any mere badge that would enable him to claim to be a scientist could make the public believe we have discovered on one hand and disproved on the other hand basic scientific laws and that we can no longer accurately predict what is possible, or what is impossible of achievement.

Science and Substitutes

There is no question but what the most effective argument now being used against further research work, in many instances, is the argument that there are revolutionary improvements "just around the corner" and that all of this expenditure in time and money will be for nought. Every attempt to conserve what are now known to be our sources of energy are resisted on the grounds that there is no need to conserve them

because science will find a substitute before these resources are exhausted. It is probably true that at no time has the scientific world been so well grounded or when our scientific work has been so well in the hands of scientists, but so far as the public information goes there has never been a time when there has been more loose talk about science or when the real thoughts of the real scientist were less in evidence. Every scientist knows that the tendency of nature is to bring all energy to zero potentiality. While some water can always be found at high altitudes, the tendency is for it to seek the lowest level where it will have no potential energy due to altitude. The behavior of water is not to create reservoirs where it may be stored at high altitudes but rather to destroy such reservoirs as it does find. Chemical elements tend to exist in nature in that form whereby the most heat energy has been released and of which none remains and in such form as neither invites dissociation or reassociation. Here and there are deposits like coal and oil capable of being united with other common commercial compounds to be found in abundance and which in turn will liberate large quantities of energy. The tendency of the day, however, is to get away from the thought that improvement is apt to come only from long work, conscientiously done and intelligently planned. We are flippantly told that research work aimed to secure minor improvements is not worth while and the man who is most readily accepted by the public as a scientist is the one with a mind best adapted to the occupation of a theatrical "press agent" who tells us that someone is about to "unlock the atom" and unloose energy without limit upon a world composed largely of old-fashioned scientists who have not learned and never will learn to work according to advanced ideas.

Reprimand Due

It may be urged by many that it is no part of the activities of scientists to either reprimand or fight other people but I hold it is the duty of every real scientists to reprimand and rebuke those who may make scientists appear impractical or ridiculous, or who are an obstacle to the progress of science and it is my belief that everybody who predicts some accomplishment to which they cannot point to a proper reason therefor is an enemy to the progress of science and only by reprimand and rebuke can this damaging talk be stopped.

I have been told at least a hundred times in the last four years that there is no reason to worry about the future of our oil supply for science will surely find a substitute for petroleum. I am sorry to say that some of these men who have said this have been classed by the world as scientists but most of the men who have told me this are without any scientific knowledge of any sort and none of them have as yet been able to offer any evidence that they have the slightest knowledge which would justify such a statement. The average man has seen wood fiber transformed into what to him is silk and he sees no reason why some other material cannot be transformed into petroleum. Perhaps it might be possible to make some material other than petroleum into a substance that would look and feel like oil, but if the law of conservation of energy holds true, and we see no reason why it would not do so, then how can we expect to take a material which contains no energy and transform it into a material having an energy of approximately 1,000,000 B.t.u.'s per cubic foot. A gallon of petroleum contains energy that is equal to upwards of twenty pounds of TNT and many people talk as though they could create this energy out of nothing.

So long as the sun shall continue to shine we will not be without the power to create all of the energy we shall need, but nobody knows what it will cost us to produce this energy. The earth receives from the sun each year such a huge amount of energy compared with what we use that its magnitude would be difficult to state by any means whereby it could be thoroughly comprehended. The problem will be at all times simply the cost of getting energy directly from the sun or from some easier source where the cost is less.

The sun delivers as much as 6 B.t.u. per minute per square foot of area. If this could all be recovered as power without loss it would in one minute equal all the power we now use in the United States in one year.

NORTH CENTRAL TEXAS

(Continued from Page 40)

made 141 bbls. at 1,009-12, 1,014-27 feet, total depth 1,074 feet.

Shackelford County

Godley & Sowell's No. 1 Davis was dry and abandoned at 825 feet. Magnolia Petroleum Co.'s No. 1 Midkiff was dry and plugged at 4,166 feet. It had sand lime at 4,151-66 feet that put 2,500 feet of fluid in the hole, as previously reported, but didn't made a commercial producer. It was mostly water. The Milham Corp of Texas' No. 1 Alexander was another failure, plugged at 1,525 feet. Overlees' No. 2 Mathews was dry and abandoned at 1,128 feet. Roeser & Pendleton and Marland Oil Co.'s No. 13 Cook-A made 100 bbls. at 1,375-83 feet, plugged back from 1,390 feet; No. 14-A-84 made 400 bbls. at 1,311-24 feet; No. 19-A-84 made 200 bbls. at 1,364-75 feet.

Stephens County

Eidson and others' No. 2 Houston made 8,000,000 feet of gas and 5 bbls. of oil at 1,861-1,951 feet. Humble Oil & Refining Co.'s No. 1 Stanford had a show of oil in top of the Caddo at 3,240-41 feet and was drilling ahead at 3,250 feet. Texas Pacific Coal & Oil Co.'s No. 63 Binney made a 20-bbl. well after an 80-quart shot at 1,877-90 feet, plugged back to 1,895 from 3,308 feet.

Palo Pinto County

Upham Gas Co. (formerly M. Dalton's) No. 1 Dalton was temporarily abandoned at 4,165 feet in the top of the gray lime where it had an estimated 500,000 feet of gas.

Taylor County

Sanger Oil & Refining Co.'s No. 1 Norwood was dry and abandoned at 3,440 feet.

Throckmorton County

Humble Oil & Refining Co.'s No. 1 Stubblefield flowed 2,366 bbls. after deepening to gray lime at 3,878-94 feet. Associated Oil Co.'s No. 1 Cook was dry and abandoned at 1,140 feet with no sand.

Wichita County

Stump & Co. and others' No. 1 Chilson, Block 4, was a failure at 1,847 feet. Bullington, Lee & Pendleton's No. 5 Jennings-B was dry and abandoned at 1,055 feet. Clark and others' No. 5 Ward & Todd was flowing 245 bbls. from sandy lime at 1,861-71 feet. Hooser's No. 4 Hines pumped 8 bbls. at 1,392-94 feet. Humble Oil & Refining Co.'s No. 3 Hines-A was dry and abandoned at 940 feet. Petroleum Production Co.'s No. 4 Allen & Kemp-D pumped 80 bbls. at 1,643-53 feet. Rubsam, Hunter and others' No. 3 McClure made 40 bbls. at 1,304-10 and 1,328-39 feet. Ryan Petroleum Co.'s No. 3 Henson was dry and abandoned at 1,885 feet, with water sand at 1,883-85 feet; No. 76 Nance made 35 bbls. at 1,293-1,322 feet; No. 77 was dry and abandoned at 898 feet.

Wilbarger County

Beatty's No. 2 Waggoner pumped 60 bbls. the first 24 hours and 40 bbls. the second day at 1,962-71 feet, total depth 1,974 feet. Empire Gas & Fuel Co.'s No. 39 Stephens was dry and abandoned at 2,551 feet; No. 42 Stephens was estimated a 5-bbl. well at 2,271½-83 feet, total depth 2,340 feet; No. 43 Stephens had 800 feet of oil in the hole at 2,326-39 feet and was cleaning out; No. 44 Stephens pumped 59 bbls from broken sand and lime at 1,765-1,825 feet, total depth 1,840 feet; No. 47 Stephens was estimated good for 20 bbls. at 857-70 feet.

Humble Oil & Refining Co.'s No. 12 Stephens was producing 10 bbls. and drilling deeper at 1,310 feet; No. 14 Stephens is a recompletion pumping 35 bbls. at 1,270-1302 and 1,367-99 feet, total depth 1,415 feet. No. 3 Waggoner-N pumped 20 bbls. after a shot of 26 quarts at 2,278-2,340 feet; No. 10 Waggoner-O pumped estimated 30 bbls. at 1,898-1,901 feet and sandy lime at 1,901-20 feet; No. 11 Waggoner-O pumped 40 bbls. at 1,870-95 feet.

Magnolia Petroleum Co.'s No. 73 fee made 13 bbls. at 1,010-20 feet; No. 54 Sumner was estimated making 3,000,000 to 5,000,000 feet of dry gas at 1,715-18 feet. Milham Corp.'s No. 8 Waggoner-L swabbed 116 bbls. at 1,878-97 feet, broken sand at 1,897-1,912 feet; No. 10 Waggoner-L was swabbing 240 bbls. at 1,884-93 and 1,918-23 and 1,933-53 feet.

Phillips Petroleum Co.'s No. 13 Waggoner-A swabbed 175 bbls. at 1,837½-71 feet, total depth 1,873 feet; No. 4 Waggoner-I swabbed 10 bbls. at 1,856½-59 feet, total depth 1,874 feet; No. 4 Waggoner-T was shot twice with 40 and 30 quarts and made 50 bbls. afterward, total depth being 2,363 feet; No. 1 Waggoner-BB swabbed 30 bbls. at 2,306-14 feet, sand at 2,277-92 feet, sandy lime, and was being put on the pump; No. 6 Waggoner-NN swabbed 51 bbls. at 2,286-90 feet, saturated lime, and 2,313-17 oil sand, total depth being 2,364 feet; No. 2 Waggoner-PP pumped 13 bbls. at 1,935-40 feet, with water sand at 1,940-41 feet. It was plugged back to 1,938 feet. No. 8 Waggoner-QQ made 120 bbls. from sand at 1,882-1,902 feet; No. 1 Waggoner-UU pumped 168 bbls. at 2,320-52 feet, total depth 2,353 feet; No. 3 Waggoner-WW swabbed 297 bbls. from oil sand at 1,896-1,908 feet and 1,927-48 feet. Roxana Petroleum Corp.'s No. 1 Waggoner-D was swabbing 35 bbls. from lime at 2,287-2,310 feet, total depth 2,360 feet.

Young County

Burton and Texhoma Oil & Refining Co.'s No. 3 Benson made 10 bbls. at 917-52 feet. Davis and others' No. 1 Holt was dry and abandoned at 710 feet with dry sand at 500-28 feet. Evans and others' No. 2 Logan made 25 bbls. at 547-49 feet. Madden and others' No. 2 Benson was good for 50 bbls. at 900-22 feet and was being put on the pump. Magnolia Petroleum Co.'s No. 7 Little made 8 bbls. at 1,273-76 feet, total depth 1,280 feet. Minnich and others abandoned the location for No. 1 Spencer. Pandem Oil Corp.'s No. 4 Whitehead pumped 100 bbls. at 867-73 feet. Roberts Oil Corp.'s No. 9 Rogers made 75 bbls. at 861-71 feet. Simms, Cosden and Consolidated Oil Co.'s No. 1 Greeg pumped 25 bbls. at 591-607 feet. Stafford & Hayes' No. 2 Wallace was a location abandoned. Tidal Oil Co. and others' No. 4 Benson-A pumped 45 bbls. at 910-41 feet; No. 6 Benson-A pumped 12 bbls. at 918-50 feet.

Atkinson & Sandefer's No. 2 Ford pumped 109 bbls. at 2,185-97 feet. Clark and others' No. 1 Davis was plugged back 5 feet and shot with 20 quarts at 3,368-80 feet and made a 40-bbl. pumper.

West Texas Completions

Crockett County

Cromwell and others' No. 5 Powell made 100 bbls. at 2,667-88 feet. J. K. Hughes Development Co.'s No. 1-B Powell made 150 bbls. from 5 p. m. July 31 to 7 a. m. August 1; 85 bbls. August 2, and 75 bbls. on the fifth from sand at 2,635-53 feet. Magnolia Petroleum Co.'s No. 1 Shannon was dry and abandoned at 4,372 feet.

Howard County

Lockhart & Carey's No. 1 Chalk swabbed 60 bbls. but was not completed. Magnolia Petroleum Co.'s No. 1 Chalk pumped 185 bbls. oil and 25 bbls. water August 1; 110 oil and 5 bbls. water August 4 and same the next day and was completed. It had pay at 1,570-83 and 1,599-1,606 feet. Owens & Sloan's No. 2 Chalk swabbed 40 bbls. and was running tubing and rods.

Mitchell County

Magnolia Petroleum Co.'s No. 5 C. M. Adams made 70 bbls at 2,938-3,050 feet. The California Co.'s No. 2 C. M. Adams, Lease 3, swabbed 22 bbls. at 2,930-3,065 feet.

Reagan County

Big Lake Oil Co.'s No. 69 University made 125 bbls. from pay at 3,137-55 feet.

West Texas Wildcats—Andrew County

Amon G. Carter and Henry Zweifel's No. 1 Cowden, location. Henry Zweifel and others' No. 1 Means, location.

Brewster County

Green Valley Oil Co.'s No. 2 J. P. Wilson, shut down at 2,170 feet. John Rosenborough & Skinner's No. 1 Skinner, shut down at 1,055 feet.

Coke County

Lipan Oil Co.'s No. 1 E. C. Rawlings, shut down at 2,640 feet.

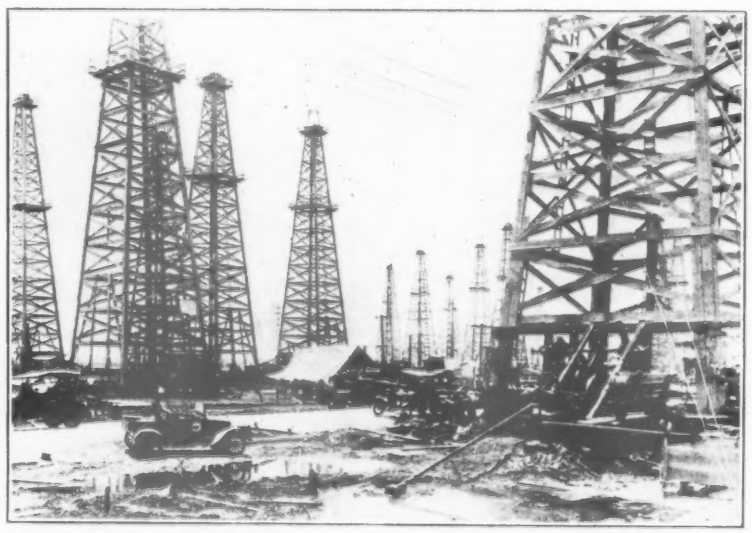
Concho County

The Exploration Co.'s No. 1 Hartgrove, location. Kemper Kimberlin and others' No. 1 Schultz, shut down at 1,520 feet. Gene Mays and others' No. 1 Hartgrove, spudding at 100 feet. Culbertson Brothers' No. 1 W. S. See, shut down 330 feet.

Crane County

Cranfill Brothers Oil Co.'s No. 1 P. J. Lea, spudding, Duffy Brothers and others' No. 1 Cowden Brothers, Section 65, Block X, C. C. S. D. & R. G. N. G. Survey, moving in rig. Gulf Production Co.'s No. 1 State-Lasseter, rigging up. Gulf Production Co.'s No. 1 Crier-McIlroy, drilling at 515 feet; No. 2 Crier-McIlroy, at 1,015 feet, top of the salt at 950 feet; No. 3 Crier-McIlroy, at 435 feet; No. 2 J. T. McIlroy, at 474 feet; No. 3 J. T. McIlroy, at 1,700 feet. Independent Oil & Gas Co.'s No. 1 E. S. Hughes, location. Magnolia Petroleum Co. and others' No. 2 University church, drilling at 560 feet. Magnolia Petroleum Co.'s No. 1 O'Keefe (University), at 2,460 feet. Marland Oil Co.'s No. 1 Hughes-

VIEW OF SPINDLETOP POOL



—Photo by Underwood & Underwood

Gibbs, Section 93, Block X, F. Rooney Survey, rigging up. E. P. Zoch and Marland Oil Co.'s No. 2 Keith-Hughes, spudding at 100 feet. The Texas Company's No. 1-F Union Land Co., Section 21, Block 35, H. & T. C. Survey, still underreaming; No. 2 H. M. King, Section 85, Block X, C. C. S. D. Survey, drilling at 500 feet. Tidal Oil Co.'s No. 1 University, at 700 feet. Texas Development Co.'s No. 1 Cowden, shut down at 3,820 feet.

Crockett County

The California Co.'s No. 2 University, Section 34, Block 7, sidetracking 5 joints 8-inch at 2,595 feet. Cranfill Brothers Oil Co.'s No. 1 Harris, location. J. S. Cosden and others' No. 1 Noelke, Section 39, Block G. G., H. E. & W. T. Survey, shut down at 3,275 feet. Cumberland Oil & Gas Co.'s No. 1 Couch, Section 18, Block Q. R., G. C. & S. F. Survey, drilling at 975 feet. Magnolia Petroleum Co.'s No. 1 Shannon, Section 8, Block B. B., E. L. & R. R. Survey, plugging to abandon at 4,372 feet. Marland Oil and Wallace's No. 1 J. S. Pierce, location. Republic Production Co.'s No. 1 L. P. Powell, moving in material. William Schaffer and others' No. 1 University, Section 9, Block 47, University, fishing at 2,191 feet. Ben Simon and others' No. 1 Shannon, drilling at 1,625 feet. J. D. Young and Carl Cromwell's No. 1 R. Massie, Section 31, Block UV., G. C. & S. F. Survey, shut down for casing at 1,625 feet; No. 1 Shannon, location. F. P. Zoch & Marland Oil Co.'s No. 1 University, Section 34, Block 29, University, shut down at 2,005 feet. H. F. Wilcox Oil & Gas Co.'s No. 1 University, Section 20, Block 30, reaming at 2,165 feet.

Culberson County

Big Lake Oil Co. and others' No. 1 C. L. Case, moving in material. Deep Rock Oil Co.'s No. 1 Kloh & Rumsey, drilling at 2,815 feet. James H. Gardner and others' No. 1 Radford Grocery Co., location. Pure Oil Co.'s No. 1 Mrs. G. H. Quaid, drilling at 5,006 feet.

Ector County

J. S. Cosden, Herny Zweifel and others' No. 1 Johnson, drilling in anhydrite at 2,955 feet. J. S. Cosden and others' No. 1-A G. W. Connell, drilling at 900 feet, top salt 870 feet; No. 1-B W. E. Connell, fishing at 2,935 feet. Exploration Co.'s No. 1 Kloh & Rumsey, drilling at 1,550 feet, top salt 1,528 feet. Llano Oil Co. and others' No. 1 E. P. Cowden, spudding at 100 feet. Simms Oil Co.'s No. 1 W. P. Edwards, drilling at 1,130 feet. F. E. Skinner and Eastland Oil Co.'s No. 1 J. W. Buchanan, running 8-inch at 2,325 feet. Leigh Taliaferro and others' No. 1 Henderson, drilling at 635 feet.

Fisher County

Ideal Oil Co.'s No. 1 W. F. Martin, underreaming 8-inch at 2,485 feet.

Gaines County

Hucony Oil Co.'s No. 1 Lindsey, shut down at 1,500 feet.

Garza County

Deep Rock Oil Co.'s No. 1 S. M. Swenson, drilling at 2,770 feet. Emerald Oil Co.'s No. 1-A Connell, shut down at 3,200 feet. Emerald Oil Co.'s No. 1 J. M. Boren, shut down at 2,600 feet.

Glasscock County

Case & Hoover and others' No. 1 Sparkman, drilling at 3,270 feet. Marland Oil Co.'s No. 1 Nellie Calder, shut down at 2,040 feet.

Howard County

Deep Rock Oil Co.'s No. 1 W. T. Scott, shut down at 3,695 feet. Poe Edgar and others' No. 1 Roberts, drilling at 690 feet. Lockhart & Carey's No. 1 Dora Roberts, at 200 feet; No. 1 W. T. Scott, at 1,106 feet; No. 1 Otis Chalk, swabbed 60 bbls. August 4 at 1,486 feet. Magnolia Petroleum Co.'s No. 2 Otis Chalk, rig; No. 3 Otis Chalk, location; No. 1 Mary Chalk, location. Owen Sloan's No. 2 Otis Chalk, swabbed 40 bbls. August 3, running tubing and rods. Reeves, Apperman and others' No. 1 H. R. Clay, drilling at 255 feet. Transcontinental Oil Co.'s No. 1 Roberts, shut down for orders at 3,730 feet.

Jeff Davis County

Herbert Oil Co.'s No. 1 T. M. Wingo, rigging up at 3,000 feet. Humble Oil & Refining Co.'s No. 1 W. W. McCutcheon, drilling at 2,035 feet. J. K. Hughes Development Co.'s No. 1 J. Z. Means, rigging up; No. 2 J. Z. Means, location.

Jones County

Phillips Petroleum Co.'s No. 1 Joe Winters, fishing at 660 feet. Shaw & Rathke and others' No. 1 William Bristow, shut down at 590 feet. J. C. Yancy and others' No. 1 Rowell, spudded and shut down; No. 1 Herndon, spudded and shut down.

Kent County

The Texas Company's No. 1 Barron, drilling at 4,050 feet; 3,500 feet of salt water at 3,985-90 feet.

Loving County

Lockhart & Carey's No. 1 L. Allen, shut down for drilling line at 1,745 feet.

Lynn County

Hart Oil Corp.'s No. 1 C. O. Edwards, cleaning out at 860 feet.

Midland County

M. Agress and others' No. 1 Jones, shut down at 2,113 feet. Rook & Zimmerman's No. 1 Hill, shut down at 3,715 feet.

Mitchell County

F. P. Zoch and others' No. 1 J. J. Ford, moving in material. California Co.'s No. 1 J. J. Handley, drilling at 1,115 feet. B. H. Cogdell's No. 1 F. E. McKenzie, shut down at 125 feet. Teas & Stivers' No. 1 Hardee, spudded 150 feet and shut down. Morrison & Thompson's No. 1 Hyman, fishing for bit at 3,150 feet. Owen & Sloan's No. 1 C. P. Conaway, drilling at 220 feet.

Pecos County

Cromwell & Kimberlin's No. 1 Scharff-Blackman, rigged up and shut down. Dixie Oil Co.'s No. 1 Hershenson, shut down order at 5,230 feet, hole full of water at 5,225 feet. Lloyd & Miller's No. 1 Bonebrake, location. Transcontinental Oil Co.'s No. 1 Perry, drilling at 3,405 feet. Southern Development Co.'s No. 1 R. G. Heiner, location. Quinby Oil Co.'s No. 1 Townsite, shut down at 2,800 feet. West Texas Exploration Co.'s No. 1 Macy, shut down at 1,160 feet.

Presidio County

Hadlock & Miller's No. 1 Toetle estate, drilling by casing at 2,200 feet.

Reagan County

H. D. Camp and others' No. 1 University, shut down for boiler repairs 2,744 feet. Marland Oil Co.'s No. 1 University, location. Marland Oil Co. and Mascho's No. 1 Sawyer Cattle Co., drilling at 2,955 feet. Marland Oil Co. and Frank Pickrell's No. 1 Sawyer Cattle Co., fishing at 2,330 feet. Ben Simon and others' No. 1 R. A. Walters, shut down at 2,030 feet.

Reeves County

Schooler, Slack and others' No. 1 Abram, shut down at 2,405 feet. Gresham & Hunter's No. 1 State land, shut down at 600 feet. Humble Oil & Refining Co.'s No. 1 Kloh & Rumsey, drilling at 4,400 feet, set pipe and tested show at 4,274 feet, bailed dry. Hole full of salt water 4,345-61 feet.

Schleicher County

Beavers & Leath and othes' No. 1 J. A. & W. T. Whiten, spudded and shut down. Cope & Dalton's No. 1 Sol Meyer, running 12-inch at 560 feet.

Scurry County

Camp Spring Oil & Gas Co.'s No. 1 J. O. Guinn, shut down at 3,866 feet. Fogelson and others' No. 1 Boyce, standing at 1,905 feet; No. 1 Haney, location. Northwest Oil Co.'s No. 1-A H. P. Welborn, testing showing at 3,428 feet.

Stonewall County

Arkansas Fuel Co.'s No. 1 Craft, shut down at 3,698 feet. Swenson Oil Corp.'s No. 1 Ward, shut down at 3,828 feet.

Sterling County

Co-Operative Lease & Development Co.'s No. 1-A E. W. Douthett, drilling at 1,265 feet. Exploration Co.'s No. 1 C. A. Boone, drilling at 1,265 feet. H. D. Rummell and others' No. 2 L. T. Clark, shut down at 1,175 feet.

Sutton County

Chesapeake Oil Co.'s No. 1 Clarkson-Allison, shut down for orders at 3,512 feet.

Taylor County

City of Abilene's No. 1 fee, rig. Sanger Oil & Refining Co.'s No. 1 Norwood, dry and abandoned at 3,440 feet; No. 1 J. F. Gillespie, rig on ground; No. 1 R. H. Anderson, shut down at 1,916 feet; No. 2 R. H. Anderson, location.

Terrell County

Sun Oil Co.'s No. 1 Scott, rig. E. T. Williams and others' No. 1 Snowden, fishing at 1,260 feet.

Tom Green County

M. D. Bryant and others' No. 1 Llano County school land, fishing at 2,980 feet. World Oil Co.'s No. 1 Pulliam, shut down for drilling line at 1,930 feet.

Upton County

Atlantic Oil Production Co.'s (formerly M. D. Bryant and others) No. 1 Baker, location. Dixie Oil Co.'s No. 6 Burleson, drilling at 2,110 feet; No. 7 Burleson, rigging up; No. 3 Hughes, drilling at 1,500 feet; No. 4 Hughes, drilling at 900 feet, top salt at 450 feet. Dixie Oil Co.'s No. 5 Hughes, moving in material. Dunning and others' No. 1 Crier-McIlroy, rigging up; No. 2 Crier-McIlroy, location. Gulf Production Co.'s No. 1 Sanger, hole full of water at 2,935 feet, pulled 8-inch, straightreaming; No. 1 J. H. Shirk-D, building rig. Humble Oil & Refining Co.'s No. 1 J. T. McElroy, spudding 100 feet; No. 1 A. S. Burleson, rigging up; No. 2, location; No. 1 Ricker & Dodson, 1,200 feet oil in hole at 2,058-59 feet, shut down for pipeline connection.

Independent Oil & Gas Co.'s No. 2 Len Taylor, Section 6, H. T. Sapp Survey, location; No. 3 rigged up and shut down; No. 4, spudding at 170 feet; No. 5, rig; No. 6, drilling at 1,425 feet; No. 7, drilling at 465 feet, top of salt 458 feet; No. 8, rigging up; No. 1 Emma Wooley, 250 feet of oil in the hole at 2,048-2,150 feet, cleaning out after shot at 2,075 feet; No. 2 Emma Wooley, drilling at 1,342 feet; No. 2 Burleson, rig; No. 3, building rig. Johnson & McCamey's No. 1 Shirk, location. McMan Oil & Gas Co.'s No. 1 Mrs. M. L. Baker, spudding at 50 feet. Marland Oil Co.'s No. 9 A. S. Burleson, drilling at 1,925 feet; No. 10, shut down for engine repairs at 1,830 feet; No. 11, drilling at 1,560 feet; No. 12, at 1,370 feet; No. 13, at 420 feet; No. 14, spudding 50 feet; No. 15, drilling 415 feet; No. 16, spudding 300 feet; No. 17, at 230 feet; No. 18, at 400 feet; No. 19, rigging up; Nos. 20, 21 and 22, building rigs; No. 2-A Burleson, drilling at 1,065 feet, top of salt 506 feet; No. 3-A, building rig.

Marland Oil Co.'s No. 8 Sanger, shot with 200 quarts at 2,181-2,230 feet and swabbed 95 bbls. July 30 and 107 bbls. July 31 and 180 bbls. August 4; No. 9 Sanger, rig; No. 10, rigging up; No. 11, rig; Nos. 12 and 13, building rigs. Marland Oil Co. and Texon Oil & Land Co.'s No. 1 Halff, rig on ground. Republic Production Co. and Marland Oil Co.'s No. 4 Baker, rig.

Roxana Petroleum Corp.'s No. 1 B. H. Estep, drilling at 2,220 feet, top of pay 2,207 feet, 1,200 feet of oil in the hole; No. 1 Della Bowen, drilling at 1,220 feet; No. 2, spudding 50 feet; No. 1 E. S. Hughes, spudding 100 feet. Sartain Brothers & Davis' No. 1 Bull, underreaming 12-inch pipe at 555 feet. Skelly Oil Co.'s No. 1 O. P. Jones, drilling at 660 feet. Sun Oil Co.'s No. 1 Burleson, drilling at 2,142 feet, 300 feet of oil in the hole, top of pay 2,112 feet; No. 2, running 8-inch at 1,985 feet; No. 3, drilling at 600 feet; Nos. 4, 5 and 6, rigs. Texas Pacific Coal & Oil Co.'s No. 1 Shirk, rigging up; No. 2, rig. The Texas Company's No. 1-C Union Land Co., preparing to plug at 3,082 feet as dry; No. 1 R. King, top of pay at 1,995 feet, 50 feet oil in the hole at 2,003 feet, running 6-inch; No. 3 King, drilling at 1,365 feet; No. 4, rigging up; No. 1 A. S. Burleson, rig; No. 2, drilling at 650 feet, top of salt 545 feet.

Val Verde County

A. Blume and others' No. 1 Moore estate, drilling at 2,400 feet. East Del Rio Oil Co.'s No. 1 Russell & Weathersbee, shut down at 2,882 feet. Plateau Oil Co.'s No. 1 B. S. Harrison, shut down for 8-inch at 2,450 feet. Independent Operator's No. 1 Whitehead, drilling at 3,340 feet.

Winkler County

Brandon & McCamey's No. 1 Kloh & Rumsey, underreaming the 10-inch at 1,130 feet. R. S. Mathews and others' No. 1 Cowden Cattle Co., building road to location. Leigh Taliaferro's No. 1 Sealy, rigging up. Ben Simon, Ladd and others' No. 1 J. W. Amburgey, rigging up. R. A. Westbrook and others' No. 1 T. G. Hendricks, was placed on the pump at 10:30 a. m. August 3 and pumped 39 bbls. fluid in 9 hours and 140 bbls. fluid in 20 hours. However, it started pumping water at 6 p. m. the same day. In attempting to pull the casing to reset packer, the casing parted.

Yoakum County

Covey & Klinke and others' No. 1 Hurdle, shut down at 100 feet. Russell & Trunick's No. 1 Hinkle, shut down at 306 feet.

PRODUCTION BY FIELDS FOR WEEK ENDING AUGUST 2, 1926

Electra

Atlantic Oil Prod. Co.	55
Empire Gas & Fuel Co.	711
Gulf Production Co.	995
Humble Oil & Refining Co.	120
Magnolia Petroleum Co.	3,385
Panhandle Refining Co.	48
Phillips Petroleum Co.	17
Prairie Oil & Gas Co.	105
Rio Bravo Oil Co.	575
The Texas Company	3,359
Texhoma Oil Refining Co.	1,262
Miscellaneous	5,400
Total	16,032

Burkburnett

Gulf Production Co.	429
Humble Oil & Refining Co.	420
Magnolia Petroleum Co.	2,718
Panhandle Refining Co.	204
Prairie Oil & Gas Co.	24
Simms Oil Co.	14
Sinclair Oil & Gas Co.	46
Skelly Oil Co.	171
The Sun Oil Co.	54
The Texas Company	387
Texhoma Oil & Refining Co.	522
Miscellaneous	7,350
Total	12,339

Iowa Park

Atlantic Oil Prod. Co.	56
Gulf Production Co.	119
Humble Oil & Refining Co.	128
Magnolia Petroleum Co.	310
Panhandle Refining Co.	44
Roxana Petroleum Co.	7
Simms Oil Co.	48
The Texas Company	210
Texhoma Oil & Refining Co.	617
Miscellaneous	2,790
Total	4,329

Wilbarger

Atlantic Oil Prod. Co.	50
Empire Gas & Fuel Co.	868
Gulf Production Co.	55
Humble Oil & Refining Co.	3,017
Phillips Petroleum Co.	6,430
Prairie Oil & Gas Co.	142
Roxana Petroleum Corp.	437
The Texas Company	24
Texhoma Oil & Refining Co.	92
Tidal Oil Co.	15
Miscellaneous	4,013
Total	15,143

Archer

Atlantic Oil Prod. Co.	238
Barnsdall Oil Co.	892
J. S. Cosden, Inc.	451
Empire Gas & Fuel Co.	114
Gulf Production Co.	2,585
Humble Oil & Refining Co.	1,300
Independent Oil & Gas Co.	10
Magnolia Petroleum Co.	1,590
Marland Oil Co.	670
Panhandle Refining Co.	133
Phillips Petroleum Co.	597
Prairie Oil & Gas Co.	1,942
Roxana Petroleum Corp.	727
Simms Oil Co.	607
Sun Oil Co.	288
The Texas Company	2,857
Texhoma Oil & Refining Co.	2,904
Tidal Oil Co.	24
Miscellaneous	12,473
Total	30,302

Young

Atlantic Oil Prod. Co.	350
J. S. Cosden, Inc.	233
Gulf Production Co.	214
Humble Oil & Refining Co.	259
Magnolia Petroleum Co.	119
Marland Oil Co.	2
Panhandle Refining Co.	138
Phillips Petroleum Co.	14
Prairie Oil & Gas Co.	8
Roxana Petroleum Corp.	120
Simms Oil Co.	544
Sinclair Oil & Gas Co.	359
Sun Oil Co.	327
The Texas Company	421
Texhoma Oil & Refining Co.	342
Tidal Oil Co.	78
Miscellaneous	4,436
Total	7,964

Stephens

Arkansas Fuel Oil Co.	25
Empire Gas & Fuel Co.	25
Gulf Production Co.	1,169
Humble Oil & Refining Co.	650
Magnolia Petroleum Co.	375
Mid-Kansas Oil & Gas Co.	1,475
Phillips Petroleum Co.	350
Prairie Oil & Gas Co.	765
Republic Prod. Co.	125
Roxana Petroleum Corp.	50
Simms Oil Co.	25
Sinclair Oil & Gas Co.	75
Sun Oil Co.	175
The Texas Company	960
Texas Pacific Coal & Oil Co.	1,175
Miscellaneous	4,550
Total	11,769

Shackelford

Empire Gas & Fuel Co.	25

XUM

Humble Oil & Refining Co.	1,375
Magnolia Petroleum Co.	50
Phillips Petroleum Co.	625
Prairie Oil & Gas Co.	10
The Texas Company	165
Texhoma Oil & Refining Co.	75
Miscellaneous	8,710
Total	11,035
Ranger	
Arkansas Fuel Oil Co.	5
Gulf Production Co.	449
Humble Oil & Refining Co.	60
Magnolia Petroleum Co.	530
Mid-Kansas Oil & Gas Co.	110
Panhandle Refining Co.	125
Phillips Petroleum Co.	15
Prairie Oil & Gas Co.	575
Republic Prod. Co.	50
Simms Oil Co.	25
Sinclair Oil & Gas Co.	310
The Texas Company	150
Texas Pacific Coal & Oil Co.	770
Transcontinental Oil Co.	30
Miscellaneous	2,409
Total	5,604
Eastland-Comanche	
Empire Gas & Fuel Co.	5
Humble Oil & Refining Co.	85
Magnolia Petroleum Co.	589
Mid-Kansas Oil & Gas Co.	135
Phillips Petroleum Co.	35
Prairie Oil & Gas Co.	85
Sinclair Oil & Gas Co.	15
Skelly Oil Co.	130
The Texas Company	95
Transcontinental Oil Co.	25
Miscellaneous	660
Total	1,850
Brown	
Cosden Co.	465
Humble Oil & Refining Co.	3,225
Phillips Petroleum Co.	125
Prairie Oil & Gas Co.	575
Simms Oil Co.	30
The Texas Company	375
Witherspoon Oil Co.	20
Miscellaneous	4,530
Total	9,345
Callahan	
Humble Oil & Refining Co.	3
Prairie Oil & Gas Co.	750
The Texas Company	125
Texas Pacific Coal & Oil Co.	20
Witherspoon Oil Co.	2
Miscellaneous	3,175
Total	4,075
Miscellaneous Pools	
Reagan County	28,537
Clay County	535
Montague County	5,267
Jack County	199
Throckmorton County	460
Baylor County	140
Palo Pinto County	445
Coleman County	1,527
Scurry County	54
Mitchell County	3,686
Crockett County	1,083
Upton County	4,678
Howard County	88
Crane County	160
Cooke County	87
Total	46,946
Panhandle	
Carson County	2,884
Hutchinson County	74,626
Wheeler County	310
Gray County	3,490
Potter County	30
Total	81,340
Grand total	258,073

PENNSYLVANIA MARKET IN GOOD CONDITION

OIL CITY, Pa., Aug. 7.—The Pennsylvania refined market was in a good condition during the past week, although price changes were very few, indeed.

Kerosene improved in both price and demand and the future for this product now looks good. Gasoline has been about maintaining itself during the week. Demand has been good and actual consumption throughout this territory has been very heavy. Neutrals are in fine condition with good demand and prices holding up well. Cylinder stocks are still weak. Filtered goods showed some improvement, especially 600E and 600D. Bright stocks were in very good demand. Fuel oil has been improving its position. Demand is better and prices have stiffened up some since the slump. Wax is not moving quite so well as it did a week ago.

DEATH OF T. P. KIMMAN

Theodore P. Kimman, works manager of the Cleveland plant of the Chicago Pneumatic Tool Co., died at his home July 24 from heart disease. He was the inventor of the first four-piston air drill and was considered an authority on mechanics. He was associated with Edward N. Hurley, chairman of the shipping board, in the development of air drills. Mr. Kimman was superintendent of the Cleveland plant from 1903 to 1921, when he succeeded his brother, H. J. Kimman, as works manager. During the war the plant was engaged in manufacturing shells for the United States, Great Britain and Russia.

NEW MAP OF NIGGER CREEK AREA IN TEXAS

The solid circle shows the Transcontinental Oil Co.'s No. 1 Rosson, the only producing well in the Nigger Creek region of Limestone County, Texas. The broken double circle shows the Transcontinental's No. 1 Ross, a dry hole. The oil showing encountered in this well caused the owners to drill No. 1 Rosson. The single broken circle shows the Pure Oil Co.'s No. 1 O'Dell, which is apparently a dry hole.

CRUDE OIL PRICES

(Continued from Page 135)

pany in Caddo, Bull Bayou, DeSoto, Crichton and Smackover.

*Posted by the Atlantic Oil Producing Co. †Posted by the Gulf Pipe Line Co. ‡Posted by the Louisiana Oil Refining Corp.

ROCKY MOUNTAIN STATES

Ohio Oil Co.—Midwest Refining Co.

(Effective May 17)

Rock Creek (Wyo.)	$2.25
Salt Creek—	
29° to 29.9°	1.73
30° to 30.9°	1.81
31° to 31.9°	1.89
32° to 32.9°	1.97
33° to 33.9°	2.05
34° to 34.9°	2.13
35° to 35.9°	2.21
36° to 36.9°	2.29
37° and above	2.37
Big Muddy	2.25
Mule Creek	1.75
Grass Creek, light	2.40
Grass Creek, heavy	.90
Elk Basin	2.40
Lance Creek	2.40
Rex Lake	1.45
Osage	2.40
Lost Soldier (contract)	1.05
Greybull-Torchlight	2.40
Hamilton Dome	1.35
Lake Basin	2.15
Byron	2.25
Notches	.65
Poison Spider	1.00
Cat Creek (Mont.)	2.40
Sunburst (Mont.) (May 6)	1.05
Florence (Colo.)	1.60
Artesia	1.95
Hogback (N. Mex.)	2.45

Note: Salt Creek, Osage, Cat Creek, Greybull and Hogback posted by Midwest Refining Co., and the remainder by the Ohio Oil Co. Both companies post Grass Creek light and Elk Basin.

(Effective March 8)

EASTERN STATES

Joseph Seep Purchasing Agency

Penna Grade Oil in New York Transit Lines (New York)	$3.40
Bradford District Oil in National Transit Lines (Pennsylvania)	3.40
Penna Grade Oil in National Transit Lines (Pennsylvania)	3.30
Penna Grade Oil in Southwest Pa. Line Lines (West Virginia)	3.30
Penna Grade Oil in Eureka Pipe Line Lines (Pennsylvania)	3.25
Penna Grade Oil in Buckeye Pipe Line Lines (Ohio)	3.05
Cabell Grade Oil in Eureka Pipe Line Lines (West Virginia) (May 17)	2.40
Corning Grade Oil in Buckeye Pipe Line Lines (Ohio) (May 22)	2.55
Somerset Medium Oil in Cumberland Pipe Line Lines (Kentucky) (May 17)	2.50
Somerset Light Oil in Cumberland Pipe Lines (Kentucky) (May 17)	2.65
Ragland Grade Oil in Cumberland Pipe Line Lines (Kentucky) (May 19)	1.25
Gaines (Pennsylvania) (Apr. 27)	2.85
Keister (Pennsylvania) (Feb. 15)	2.30

MIDDLE WESTERN STATES

Ohio Oil Co.

(Effective May 17)

Lima	$2.48
Wooster	2.55
Illinois	2.37
Indiana	2.25
Princeton	2.37
Plymouth	1.90
Waterloo	1.35
*Western Kentucky, 32.9° and below (May 18)	2.10
33° to 35.9° (May 18)	2.20
36° to 38.9° (May 18)	2.30
39° and above (May 18)	2.40
†Cumberland, Barren and Monroe Counties, Ky.	2.65
**Oil in lines of Stoll Oil Refg. Co. in Oil City, Ky.	2.65
**Oil in lines of Stoll Oil Refg. Co. in Tinsley Bottom, Tenn.	2.46
‡Oil Springs (Canada) (May 18)	2.95
‡Petrolia (Canada) (May 18)	2.88

**Posted by Stoll Oil Refg. Co. *Posted by Indian Refining Co. †Posted by Paragon Development Co. ‡Posted by Imperial Oil Co., Ltd.

MEXICO

(Effective May 13)

*Tuxpam light (f.o.b. Mex. ports)	$1.35
‡Panuco heavy (f.o.b. Mex. ports)	1.15
Tuxpam (New York)	2.15
Panuco (New York)	1.80

*Plus 32.328c tax. ‡17.631c tax.

TRANSPORTATION IS DISCUSSED AT CHICAGO

(Continued from Page 37)

a shipper might load 5,000 gallons of gasoline into a 10,000-gallon car and the road would receive pay for hauling the smaller amount although it had actually transported the larger car. There was little opposition to the suggestion that the maximum outage be made 5 per cent.

Colonel Dunn of the Bureau of Explosives asked in a letter that the definition of casinghead gasoline be revised to meet a condition he detailed. The McKean County refinery was taking the vapors from its storage tanks and stills and condensing these vapors by a process similar to that used in making natural gasoline and shipping the product as refinery condensate. It was suggested that Mr. Boyd write to the management of the McKean County Refining Co. and after ascertaining its views communicate with Colonel Dunn. There was no objection made to such a modification of the definition of casinghead gasoline to include the product if the product was casinghead gasoline as asserted by Colonel Dunn.

No interest was shown in the revision of specifications of wooden containers except by two members whose concerns made them. These two members with any others who might be interested were appointed a committee to act.

The proposed plan to have the railroads pay for mileage by check instead of notifying car owners of the amount due and authorizing a draft on the road was withdrawn when some of the older and larger organizations opposed any change. They claimed the present method was more prompt as the banks would credit the draft immediately while the mailing of a check might be delayed indefinitely.

On the list of mechanical subjects much debate followed the suggestion that the roads be asked to notify car owners of any repairs to be made as soon as ordered through the means of a card to be furnished by the owner. This was decided to be impracticable. There was a general desire for more prompt billing for repairs made in transit but no workable suggestion was brought out. Several methods of keeping check, such as stamping or marking each part of a car so that the inspector at the home plant could determine if it had been replaced, and of frequent and careful inspections and reports made of repairs actually made or of bills for repairs received. It was stated the whole matter was one of common honesty. It was suggested an attempt be made to bring more prompt billing before the aribitration committee of the A. R. A. The other subjects under the list of mechanical matters were dismissed with the consent of the proposer.

Secretary Boyd, who presided at the meetings, stated that the A. P. I. had no transportation department, this committee was the transportation section. Any member could have a subject placed on the docket and having it placed there that member should attend the meetings and keep it there until it had been acted upon. The next meeting, Mr. Boyd stated, would probably be held in Tulsa on December 6, during the annual meeting of the A. P. I.

PANHANDLE PRODUCTION MAY DROP QUICKLY

(Continued from Page 31)

panies seem to have quite a bit of oil storage, and there is no need for them to pinch in their wells, but the majority of operators find themselves forced to limit the output of their wells. The daily oil runs of the Magnolia Petroleum Co. have been reduced from 15,000 bbls. to 5,000. The Plains Pipe Line Co. and the Panatex company were running approximately 13,000 bbls. each daily, and their runs have been curtailed to a figure of 3,500 bbls. each. As a result of the curtailment of runs, every lease in the field has some oil in storage.

Summed up, the attitude of the crude oil purchasing companies seems to be that there is ample oil of good quality available in other localities, and therefore it is not advisable to handle Panhandle crude. Unless some relief from the present situation appears, the field may experience a decline of 25,000 bbls. daily very soon.

The railroad congestion has caused much annoyance. It is simply a problem of the business handled by the railroads mushrooming out almost overnight and reaching a point where freight movement is impossible. The wheat harvest season is now on in earnest, and presents a serious phase to the problem. There are piles of wheat standing at railroad sidings all over the region. At one station there were three piles of wheat which were 600 feet long and 15 feet high. The Texas Railroad Commission has ordered the railroads to move the wheat, to the exclusion of the oil freight.

The commission prohibits the drilling in and shooting of wells unless ample storage be available. Steel storage tanks which are standing at sidings cannot be touched until wheat is moved. Wheat cannot be loaded until cars and room on the sidings are available, and there we have the circle in the field.

The superior qualities of the crude found at Pampa, northeast of the main producing body of the field, removes it from the trouble zone. This oil is a good refining proposition, and has caused no annoyances with equipment. It is being moved regularly, and takes its place with Mid-Continent crude.

SALT WATER FROM OIL WELLS TURNED TO PROFIT

(Continued from Page 38)

process, the iron oxide has been successfully used as a paint. Magnesium, which is present in the form of chloride, is taken out in the form of magnesium hydroxide by precipitation with lime.

The salt is removed by concentration and evaporation. This is accomplished in the large vat shown in the picture accompany this story. The vat is 260 feet long, and 60 feet wide. The side walls slope to within 12 inches of each other, and this leaves a square trough at the bottom of the vat. Standard salt practices are employed in parts of the process, but this vat and evaporation system are the only ones in existence which make various size grains of salt, all other vats making a single size grain only.

Entering the vat, the brine is sprayed through a series of spray nozzles, and the salt contents settle down into the trough at the bottom of the vat. A chain conveyor traveling through this trough carries the salt to the surface, and into the various processes common in salt making.

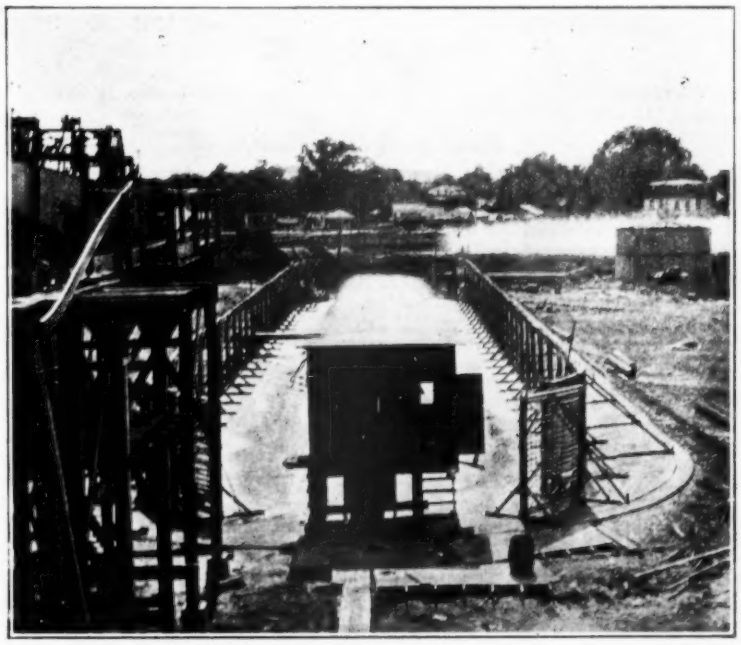
The unusual feature of the plant is that the brine is in continuous circulation between the salt vats, and the Sand Springs power plant which is used in conjunction with the process. The brine is carried from the vats to the power plant, where it is used in raising the thermal efficiency.

Brine Highly Concentrated

Passing repeatedly through the spray nozzles and the power plant, the brine is concentrated nine volumes to one. In other words, nine gallons of salt brine after circulation are reduced to one gallon. At this point in the process, the brine has been reduced to what is known in the salt trade as bittern, and contains 40 per cent calcium chloride, and 60 per cent water. In the process 95 per cent of the evaporation is done in the large vat and the remaining 5 per cent of evaporation is done in the calcium plant under high pressure steam. The evaporation continues until the bittern is 75 per cent calcium chloride. In the circulation process, the brine passes through the vat and the power turbines between 50 and 75 times. In the calcium plant the calcium chloride is put into flakes, liquid and various forms.

In considering the different products, the growing use of calcium chloride might be recalled. Ten years ago calcium chloride was an industrial orphan, and its only extensive use was in refrigeration. The years have brought about a multiplication of its uses. The more recent employments for it include its being utilized as a dust preventative instead of road oil, and its work in curing concrete. Some specifications now call for two pounds of calcium chloride to the bag of cement. It is said that by including this ingredient, concrete possesses 18 per cent additional strength, and that it is possible to thrown open a road made out of this concrete in seven instead of 28 days.

After being removed from the vats, the salt is carried into salt houses, rectangular buildings. In these buildings, direct current electricity is turned into the salt, and by its introduction caustic soda, chlorine, hydrogen and bleach are made. The great latitude these ingredients possess in industrial use is apparent, but the proximity of so many markets to the Sand Springs plant assures a benefit of mutuality to the manufacturers and the purchasers of these commodities. The refiners located in this region use large quantities of caustic soda and bleach, in their processes of treating petroleum products, and before the Sand Springs salt plant was started, the nearest supply of these products was Detroit, Mich., and Niagara Falls, N. Y.



The salt vat where 95 per cent of the evaporation takes place.

FRACTIONAL REDUCTIONS IN GASOLINES

(Continued from Page 28)

however that despite an increase of 10 to 15 per cent in actual gasoline consumption in the states where the Mid-Continent sells its output, the refiners of the latter area are actually selling less gasoline than last year.

The only explanation, of course, is that refiners in adjoining areas are getting more and more of the business. In this connection it is generally agreed that the major oil companies whose refineries in most instances are located outside the Mid-Continent have shown the greatest increase in tankwagon and service station sales so far this year. The quantity discount plan in sales, large advertising programs in connection with the sales of new motor fuels and expansion in marketing facilities are offered in explanation of the increased sales of the integrated organizations. The phenomenal increase in the gasoline sales of The Texas Company is an illustration of this situation.

Jobbing interests considered as a whole have apparently not been able to secure their proportionate share of the increase in gasoline consumption and this fact accounts for the situation in which the Mid-Continent refiners as a unit have been forced to curtail rather than expand their operations.

It is true, however, that this reduction in crude throughput and increased gasoline recovery has aided the market in other products. Kerosene and fuel oil and gas oil production is substantially less than last year and prices are also considerably higher. It is this fact that has enabled the Mid-Continent refining industry to continue operations despite lower crude and gasoline prices.

Gasolines and Naphtha

The moving price to the trade on 58-60 U. S. Motor gasoline the first of the week was 11¼ to 11½ cents. Refiners who advanced their quotation to 11¾ cents last week returned to the 11½-cent quotation the first of this week. Some material was being offered over the entire month at the 11¼ to 11½-cent quotations. Several refiners are sold up for the month but those that still have the bulk of their output to move were not being flooded with either inquiries or orders.

It was apparent on Tuesday that a few brokers believed the market weak enough to justify short sales for the balance of the month. Representative opinion, the first of the week was to the effect that there would be little change in the present price structure for the next two weeks at least. Refiners outside the Mid-Continent have been actively soliciting business in overlapping trade territory but they were getting such a volume of business that in at least two cases the refiners had found it expedient to advance their prices so that they were in line with Oklahoma.

The prevailing price on 60-62 400 was 11¾ cents and 64-66 375 12 to 12¼ cents. Sales were confined to routine orders and several refiners were more anxious to move the higher gravities than 58-60 or 56-58. The latter grade was available at 11 to 11¼ cents.

Despite the weakness in gasolines, naphthas on Tuesday were apparently holding their own. The few sellers of the 50-52 grade had not reduced their prices below 11 cents. The low natural gasoline price is the most important factor in the naphtha situation. Refiners, rather than sell their naphtha output at low prices prefer to blend with natural gasoline and refinery gasolines to secure a product meeting straightrun specifications.

Kerosene and Distillates

A pick-up in buying on Friday and Saturday strengthened the kerosene market. Previously the 41-43 grade had slumped to a low of 7½ cents in Oklahoma and 7¼ cents in North Texas. The new buying was sufficient to remove the material responsible for lowering the market and the quotations on that grade this week up to Tuesday was 7¾ to 8 cents. The 42-44 grade was moving to the trade at 8¼ to 8½ cents.

Distillate business was not as great this week as last. Buyers objected to paying more than 5 cents for the best grades and refiners were trying to obtain as high as 5½ cents. A few contracts are reported to have been made based on the spot market at time of delivery.

Fuel and Gas Oils

Although not so active as the previous week fuel oil prices were firm. That there is no acute scarcity of this product as some believe in the Mid-Continent is shown in the table previously referred to. The Government reports shows there were 244,000,000 gallons in storage on July 1. Not much of this material is in the hands of the smaller refiners and buyers have difficulty in securing quotations from these sellers. Prices ranged from $1.25 for the lowest gravities to $1.50 for gravities about 30 degrees. Several plants are storing in expectation of higher prices in the fall.

The 4¾-cent low price on 32-36 gas oil suitable for cracking of last week was not maintained. The material could be bought as low as 4¼ cents with 4⅛ the prevailing quotation on the dark gas oil. A few refiners are using their gas oil as blending material in making low gravity distillates for which there is a good demand.

Natural Gasolines and Blends

Natural gasolines as previously explained were stronger. The manufacturers explain that their regular customers have increased their purchases and this, coupled with some additional outside business, explains the increases. The A grades were moving readily at 8¾ cents. C grade was in demand at a price range of 8⅛ to 8⅜ cents.

There was no change in the blend market. The usual asking price regardless of gravity was 10¾ cents.

Lubricating Oils-Wax

Any grade of lubricating oil suitable for blending as motor oil was salable in Oklahoma last week. Oklahoma manufacturers said practically all their customers were buying more material this month than last. There have also been at least two substantial purchases of cylinder stocks for movement to other refiners. There were no general changes in prices.

Inquiries for wax were few and the prospective buyers were endeavoring to secure further price concessions. The sellers believe the wax market in this territory will improve next month and up to date are refusing the concessions sought.

NORTH TEXAS MARKET FUEL OIL ADVANCES

WICHITA FALLS, Tex., Aug. 9.—Advances in fuel oil prices featured the refined market in North Texas the past week. Railroad buyers entered the market last week and forced the market from $1.40 to $1.50 for the 24-26 and 22-26 grades. This buying has about taken all the material from the smaller refiners and it is expected the market will continue firm over the remainder of the month.

The advance in fuel oil had no effect on other products. Gas oils and distillates were firm but did not advance from the price levels established last week. The best grades were bringing from 5 to 5¼ cents and gas oil was quoted from 4⅛ to 4½ cents.

Kerosenes have partially recovered from their recent slump. The 41-43 grade dropped to 7¼ cents the middle of last week. Buyers then came into the field and the low on that grade today is 7½ cents with some refiners selling at 7¾ cents.

Gasolines continue sluggish. The U. S. Motor grade is being sold as low as 11 cents. The higher gravities are also weak. The 60-62 400 grade was being purchased at 11½ to 11⅝ cents. The 64-66 375 grade was being sold under 12 cents.

Natural gasolines were considerably stronger. In the Breckenridge area the A grades were selling at 8¾ cents with some manufacturers asking 9 cents. The B grades were moving readily at 8⅜ to 8½ cents. The Grade C was selling at 8⅛ to 8¼ cents.

SHREVEPORT MARKET REPORTED WEAKENING

SHREVEPORT, La., Aug. 9.—Unstable conditions in north Texas and Oklahoma were felt in the Shreveport territory last week and the fore part of the week refiners were experiencing difficulty in keeping prices on the level made during the previous two weeks. Gasoline movements were steady enough for Shreveport refiners but inquiries began to fall off the latter part of the week. Kerosene also was showing a tendency to weaken.

Natural gasoline opened the week showing a tendency to weaken but strengthened and by the end of the week its price was firm and little was available. Gas oils and distillates are strong and are the fastest moving of all products. Little is available in the territory. Fuel oil remained stationary.

In Arkansas, the gasoline market was soft with several refiners making an effort to keep prices firm. Others, meeting stiff competition from other quarters when selling their products outside of the territory, were forced to bring their prices down. Kerosene was soft in Arkansas and all other products were strong.

COMPANIES INTERESTED IN GOVERNMENT'S TEST

(Continued from Page 32)

matter of increased recovery directly. Principally the proposed investigations go back to such fundamental things as the determination of the origin of petroleum, but the work on such problems is considered to have indirect and possibly direct bearing on the matter of increased recovery.

The importance of increased recovery methods is largely recognized by the industry. The report of the Committee of Eleven of the American Petroleum Institute on Supply and Demand summarized the results of various methods. If it is found that the soda ash method is applicable generally in fields and that its success is not confined to fields such as the Bradford district, the possible effect on recoveries, and particularly on the revivification of old fields, is recognized to be tremendously important.

Flooding in Various Fields

Flooding at Bradford has drawn great attention to the method as regards its application in other fields. Without the soda ash method, some authorities believe it cannot be applied successfully in other fields, basing their opinion upon results of flooding in other localities. Others, for the same reason, are convinced that it can be successfully used in the greater number of fields in the Appalachian region. The Committee of Eleven states:

"Due to similarity of conditions it might reasonably be expected that the fields of West Virginia and eastern Ohio will respond to flooding, like those in Pennsylvania. Outside these areas, however, the similarity of conditions is less apparent, and water flooding effects are not known where water has had access to the oil sands by means of an improperly plugged well, or through a leaky casing. These instances indicate that many sands in various parts of the country, where gas has been the expelling force for oil, will yield additional oil upon flooding, though probably less on the average than in eastern fields. While the sands of many fields may be suitable for flooding, there may be obstacles in the way that will cause other methods to be substituted. In a number of fields water supply is lacking, while in others the cost of drilling would be too great to permit Bradford Field practice."

It is apparent that if further experiments bear out the hopes of the investigators concerning the soda ash process, features of the water drive which make it impractical or doubtful in other fields will be removed by application of the soda ash method, and the importance of the work being done by the Government is therefore generally recognized in the industry.

COMPLETES IRAQ SURVEY

The Turkish Petroleum Co. is now making preparations for an intensive drilling campaign in its Iraq fields. Professor Bockh, the geological administrator, has made a detailed geological survey of the various concessions. He was formerly the Hungarian Minister of Mines. He contemplates a tour of the Venezuelan oil fields.

TOO LATE TO CLASSIFY

FOR SALE AT BARGAIN PRICES

Three 80 H. P. Reeves Vertical Gas Engines.

One 135 H. P. Reeves Vertical Gas Engine.

One 27x14 Ingersoll-Rand Duplex Vacuum Pump.

One 12x12 Ingersoll-Rand Duplex Compressor.

One 23x16 Laidlaw Dunn Duplex Vacuum Pump.

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Shreveport, La.

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(Patent Pending)

On the Rotary—set your conductor pipe, then finish your hole with one "Hornbeck" Bit making only one round trip.

Handles all formations.

On the standard—tool dressing, breaking joints and underreaming is dispensed with.
I wish to have this manufactured on a royalty basis or will sell invention outright.
Send personal representative not later than Wednesday, August 18.

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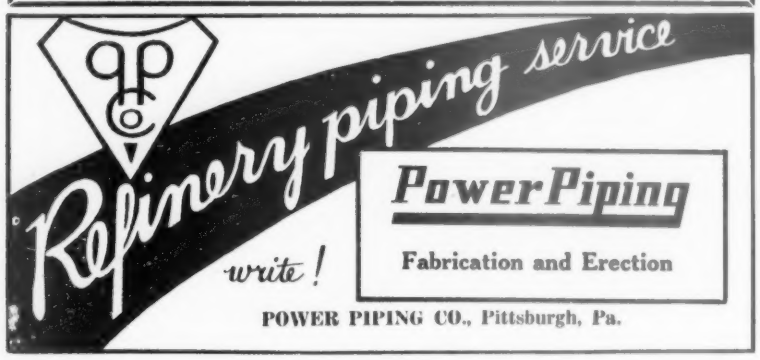

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Determining Presence of Air in Gas

Proper Laboratory Equipment Necessary to Determine Its Presence. List of Chemicals Required at Natural Gasoline Plants Is Given

By Frank P. Peterson*

Having touched the subject of meters, appropriate treatment will take us on to instruments for plant control in general. Since most, if not all, of the instrument record of operation must pass the laboratory for inspection and interpretation we might best pass next to consideration of the laboratory. For the present it will suffice to deal with laboratory supplies, and later, when we take up the actual functions of the laboratory in plant control, we may see how these supplies are used. Indeed, before we lose touch for the time being with the detail of interpretation of meter charts, we shall find immediate contact with the laboratory section of the work. As soon as we have reached the atmospheric pressure line of static chart records, we must be prepared to examine our gas streams for the presence of air.

The compact type of "analyzer" so universally used in the fields is, the writer thinks, the direct descendant of the industry's need, and the instrument has evolved to a rather high state of perfection as compared to what it was when he went in search for it in 1911 for the specific purpose of examining casinghead gas for oxygen, carbonic acid and carbon monoxide.

Given a meter chart showing a pressure line below atmospheric, or zero, gauge, and which shows a sudden increase in volume of gas measured, the interpretation is one of two things: either more gas has been turned into the line which the meter serves, or the line has been opened or parted on the upstream side and air is being admitted. Since some small percentage of air will always be present in a system of which any portion is being operated below atmospheric pressure, and since this percentage will also vary from day to day, and since the case of a single meter delivering, say 5 per cent or less of the total stream of gas to plant can not affect air content in the total stream to the very serious disturbance of operation in many instances, it will be seen how important is the matter of close inspection and study of the meter records for their proper interpretation. And, interpretation in a case of the foregoing character will lead to prompt investigation on the part of the chart collector to determine which of the things above mentioned may have been responsible for the recorded performance under consideration. When the fact is developed that no new additional volume of gas may have been turned into the detail of lines served by the meter the matter will be referred at once to the laboratory and from this section of operation inspection will be made in search of air.

Finding Air

It is a surprising fact now supported by a vast amount of data that free oxygen is known to occur only in very, very small amounts present in natural gases. Oxygen, if present in more than "trace" amounts, indicates dilution of natural gas with air. Since we know the proportions of oxygen and nitrogen composing air, and since it has become a very simple matter with the compact and useful analyzer equipment to determine the amount of oxygen present in a mixture of gases the simple procedure is to check the suspicious stream of gas at once for oxygen. If oxygen is found present, we know that appoximately five times its volume of air has been permitted to enter and pass the meter along with the stream of gas.

Since absorption processes have now supplanted entirely the old method of operation, and have departed from high pressure on gases for removal of gasoline, and since oxygen must be present in a relatively large percentage, as against the old method to involve either serious danger or detriment to production in plant operation, the method just discussed is largely a matter of efficiency and the saving of operation expense. Operation will check such matters as this closely, however, from both the consideration of economy and plant operation efficiency. The purchase of gas, now very largely standardized on a basis of about 33⅓ per cent gross revenue royalty, is the largest factor, usually, of operation expense. Also, it is obviously wasteful to employ machinery in or to permit the wasteful use of field equipment for the handling of air.

The laboratory will provide, therefore, in its stock of chemicals those necessary for making up the solutions required in the detail branch of gas analysis adapted to examination for oxygen, CO_2 and carbon monoxide. It is an interesting fact that carbonic acid or CO_2 is rather frequently found present with natural gas, in some instances quite worth while as affecting the value of the gas for fuel purposes especially. As high as 30 per cent of this component is sometimes found in gas which yields natural gasoline profitably. CO, or carbon monoxide, is also found somewhat less frequently and not to any appreciable precentage. CO_2 involves no element of danger in plant operation. And while CO is dangerous, even in small percentage present, it is only so as a poison and this is not to be given serious consideration for the reason that operative forces never permit themselves to be exposed to any great extent to the gas which they handle. Nitrogen is also found in the free state (or not as a component of air), as a component of natural gas about as frequently as in CO_2 and rather is to be expected when CO_2 is found. Both the latter are diluents simply and do not affect operation except as such. It has not been customary to provide, the writer believes, in gas purchase contract for elimination in payment for these diluents when they are present and instances are known where productive gas may run to percentages in excess of 50 per cent such diluents.

Laboratory Equipment

Laboratory will provide and stock chemical supplies about as follows for the large plant operation:

Acids as follows:

Hydrochloric, C. P., concentrated, for analytical purposes, 6 pounds.

Hydrochloric, ordinary commercial, where conditions develop requiring general use in plant, stock by the carboy.

Hydrofluoric, 48 per cent commercial in ceresine bottle, 1 pound.

Nitric, C. P., concentrated, 7 pounds.

Pyrogallic, re-sub, U. S. P., 1 pound.

Note: Due to the tendency of pyrogallic to deteriorate on exposure to air it is not best to stock this in large quantity.

Sulphuric, C. P., concentrated, 9 pounds.

Alcohol, methyl, 95 per cent (for general use as a solvent and cleaner), a gallon.

Note: The latter might best be denatured.

Asbestos, acid washed and ignited for Gooch, short fiber, 6 ounces.

Calcium chloride, anhydrous, small, granular, 1 pound.

Calcium hydrate, C. P., 1 pound.

Castile soap, 5 pounds.

Charcoal, activated, nut shell, 50 pounds.

Copper, metallic, fine turnings, 2 pounds.

Cotton, absorbent, 5 pounds.

Emery, fine, 1 pound.

Emery flour, 1 pound.

Fullers earth, for laboratory use only, 5 pounds.

Note: Laboratory may supply the last named item, sized to specifications, when the same may be required in quantity in plant operation.

Glass wool, fine, 5 pounds.

Lead oxide, PbO., C. P., 5 pounds.

Mercury metal, virgin grade, for laboratory stock only, 50 pounds.

Note: Very considerable stock of mercury will be required in field and meter operation and may be stocked or supplied through the laboratory branch.

Methyl orange (indicator), 4 ounces.

Phenolthenalein, U. S. P., 4 ounces.

Shellac orange, flakes, for laboratory requirement only, 1 pound.

Note: This material will also be used extensively, together with a considerable requirement of alcohol, and may be stocked or supplied through the laboratory branch for plant operation.

Silver nitrate, crystals, C. P., 4 ounces.

Sodium hydroxide, NaOH, 1 pound.

Sulphur, flowers, 1 pound.

Potassium hydroxide, KOH, 5 pounds.

Ammonium chloride, NH_4Cl, crystals, 1 pound.

Cupric chloride, Cu_2C_{12}, 1 pound.

While the foregoing stock items will be sufficient ordinarily for the general run of work, special conditions will arise calling for more or less varied laboratory research and treatment which will call for or suggest provision for other things. Out of the stocks above provided one of the first details will be the preparation of re-agent solutions for examining gas by analysis for oxygen, CO_2 and CO diluents in natural gas. These re-agent solutions will be charged into the "analyzers" above mentioned. For this purpose the following stocks may be made up, since they will be in immediate requirement as soon as plant is in operation.

CO_2 SOLUTION:

1 part NaOH or KOH; 3 parts distilled water.

OXYGEN SOLUTION:

10 grams pyrogallic acid (powdered);

25 cc distilled water;

To this add 35 cc KOH solution made as follows:

280 grams KOH sticks;

1,000 cc distilled water.

CARBON MONOXIDE SOLUTION:

14 grams NH_4C_1 crystals;

14 grams Cu_2C_{12};

Mix dry and add 60 cc distilled water plus 30 cc. NH_4 OH (concentrated.)

Further along the manipulation of the analyzer apparatus and the stocks in it will be treated in detail. Notwithstanding the fact that the apparatus is in common use by many men, the results to be determined and indicated by it are governed by the skill and precision which is exercised. A very considerable latitude of error may exist through carelessness or lack of precise training and understanding on the part of the men doing the work. Chemistry as it is applied in our section of the industry is quite limited in its range and involves rather largely the science of physics which has an equal, if not paramount, place in the work. The writer is pleased to state that he has the promise of A. E. Dean, detailed in field and research work with the Mid-Continent Petroleum Corp., to take up and treat this particular subject in detail, and he knows no one better qualified to do it.

*This article is the fourth of a series by Mr. Peterson dealing with the operation of natural gasoline plants.

OBTAINING CRESYLIC ACID IN REFINING PETROLEUM DISTILLATES

By L. J. Catlin*

Standard Oil Co. of Kansas, Neodesha, Kans.

The presence of cresols and phenol in cracked distillates has been demonstrated by Brooks and Parker. This paper presents data obtained from samples produced in a continuous treating plant handling cracked distillates, where a wash of caustic soda was used as the first stage of the treating process. The oil was precipitated from the caustic by neutralization with hydrogen sulfide from still gases. It was found necessary to carry this reaction considerably beyond the neutral point to a condition where the alkali tested about 60 per cent NaHS and 40 per cent Na_2S in order to get a ready separation of the oil from the solution. Even at this point the residue liquor contained considerable quantities of oily products, which separated at a high concentration of the alkali in the process of recovering the sodium sulfide.

A distillation was made of the oil precipitated from the caustic solution using 500 cc. in an Engler flask. Between the temperatures 195° and 227° C., 10 per cent fractions were separated for further examination. All these fractions reacted positively to tests for cresylic acid as outlined by Allen. The fractions between 195° and 205° C and between 205° and 210° C. had a specific gravity of 0.9951 and 1.0052 (15°/15° C.) respectively, thus showing the absence of ortho-, meta-, and para-cresols. Further data on this distillation are shown in Table I.

Table I

(Specific gravity of sample, 1.058)

Temperature °C.	Per cent off	Sp. gr. of 10 per cent fraction
101	10 (water)	
195	15 (water and oil)	
205	25	0.9951
210	35	1.0052
212	45	
219	55	
226	65	1.0262
227	75	1.0270
232	82	
Average (195° to 227° C.)		1.0134

Another distillation was made and the composite sample from 195° to 227° C. was redistilled in a 100-cc. Engler flask in comparison with commercial samples as shown in Table II.

Table II

	Cresylic Acid			
	Cresol U.S.P.	97 pct.	95 pct.	Petroleum acid
Sp. gr. (15°/15° C.)	1.033	1.032	1.030	1.0057
Sulfur, per cent	0.0	0.098	0.033	0.47
Water, per cent	0.5	2.0	2.0	1.0
Distillation				
Per cent off	°C.	°C.	°C.	°C.
5	194.5	196.7	196	205
10	194.7	197.2	197.3	205.5
20	195	198.3	200	206.7
30	195.5	199	201	208.9
40	196	199.5	202	210
50	196	200	205	211
60	196	201	207.2	212.8
70	196.2	202	211	215.6
80	196.7	204.4	217.2	218.3
85	.....	.....	.....	221
90	197.2	208.3	231	.....
95	197.7	214.7	246	.....

The relation of specific gravity to boiling point on the petroleum acid suggests methylphenyl carbinol, (K) $CH_3(C_6H_5)$-CHOH, specific gravity 1.003 (25°/25° C.) boiling point 218 to 220.

Samples similar to the one reported in Table II were sent to various companies dealing in coal-tar products, one of which reported it as containing "87 per cent of tar acids of rather high boiling character." The oil has a very strong odor suggestive of mercaptan products, which is further indicated by its high sulfur content.

In the process of recovering sodium sulfide from the spent alkali it was first

(Continued on Page 150)

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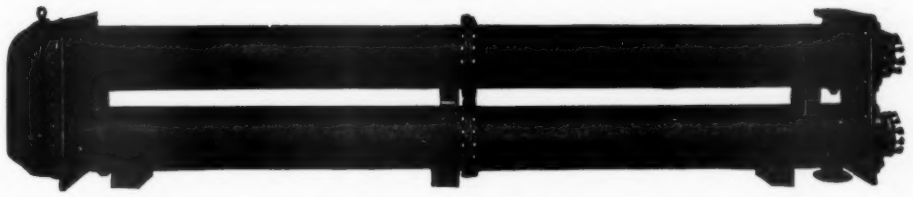

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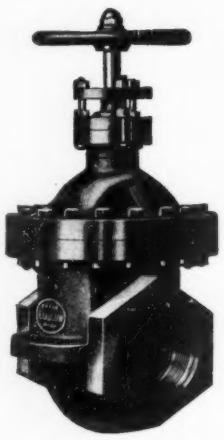

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CRUDE STOCKS SHOW DECLINE IN ARKANSAS AND EAST CENTRAL TEXAS

HOUSTON, Tex., Aug. 7.—Stocks of Gulf Coast crude increased 476,437 bbls. in the period between June 1 and July 1. On the latter date the total in steel and earthen tanks aggregated 12,876,357 bbls. compared with 12,399,920 bbls. June 1.

Increases are noted in the storage at Spindletop, Sour Lake, Goose Creek, Vinton, Lockport and South Liberty. An increase in the daily average gross production late in the month is in part accountable for the increase.

Stocks of crude in the southwest fields increased 451,430 bbls. during the same period, the Luling surplus increasing from 214,250 bbls. June 1 to 666,430 bbls. July 1. The purchase of the holdings of the United North & South Oil Co. by the Magnolia Petroleum Co. added to the storage of the latter company in that field.

The north central and east central Texas fields combined show a decline of 1,304,030 bbls. compared with June 1.

The greatest decline in stocks is in the north Louisiana and Arkansas fields, registering 1,653,645 bbls. during the month.

The following table shows the stocks in each division:

COASTAL CRUDE IN STORAGE JULY 1, 1926

Districts—	July 1 Steel Tanks	July 1 Earthen	June 1 Steel Tanks	June 1 Earthen
Sour Lake	1,795,951	1,975,610	1,642,270	1,975,500
Humble	661,230	2,167,140	616,170	2,116,290
West Columbia	1,269,920	1,116,715	1,284,630	1,118,540
Spindletop	1,875,780	.....	1,721,675	.....
Orange	225,350	490,660	202,370	647,720
Hull	260,000	51,000	309,720	55,495
Goose Creek	149,660	69,600	141,635	7,800
Pierce Junction	53,210	.....	2,485	.....
Saratoga	187,000	.....	190,750	.....
Big Creek	34,000	.....	4,660	.....
Jennings (La.)	77,175	.....	92,425	.....
South Liberty	45,240	.....	24,600	.....
Vinton (La.)	275,320	.....	201,015	.....
Markham	8,900	.....	10,300	.....
Batson	4,000	.....	4,400	.....
Damon Mound	9,450	.....	5,875	.....
Barber Hill	1,050	.....	4,100	.....
Dayton	250	.....	200	.....
Anse La Bute	960	.....	960	.....
Lockport (La.)	71,870	.....	18,335	.....
Totals	7,006,316	5,870,725	6,478,575	5,921,345
Combined totals July 1		12,876,357		
Combined totals June 1		12,399,920		
Increase		476,437		

SOUTHWEST FIELDS

	July 1	June 1
Luling	666,430	214,250
Lockhart	985	11,735
Mirando	*325,000	315,000
Totals	992,415	540,985
Increase		451,430

*Estimated.

NORTH AND EAST CENTRAL TEXAS

Field—	July 1	June 1
Eastland-Stephens	9,145,000	9,056,150
Burkburnett	394,435	363,425
Electra	396,130	285,850
Archer County	54,715	45,220
Vernon	19,000	16,365
Petrolia	28,210	20,670
Nocona	27,485	45,980
Mexia	11,061,695	11,419,700
Powell	4,134,000	5,318,520
Currie	12,950	5,770
Totals	25,273,620	26,577,650
Difference	1,304,030	

Panhandle stocks not included.

NORTH LOUISIANA AND ARKANSAS

Smackover	26,152,990	27,456,100
El Dorado	2,965,300	3,391,795
Nevada County	465,400	.....
Homer	4,056,020	4,108,100
Haynesville	3,724,000	4,022,900
Crichton, De Soto, Bull Bayou	4,431,720	4,507,320
Bellevue	196,700	162,590
Cotton Valley	314,445	340,590
Urania	82,000	52,835
Totals	42,388,575	44,042,220
Decrease	1,653,645	

In addition to the stocks of Gulf Coast crude there are approximately 5,830,865 bbls. of light gravity crudes from northern fields stored at tank farms and refineries in the coastal region. Compared with June 1 this is a decrease of 124,235 bbls. The Humble Oil & Refining Co. has 1,546,000 at Baytown compared with 1,526,700 June 1 and 1,245,000 bbls. at Webster tank farm compared with 1,545,000 June 1. The Sinclair Oil Refining Co. has 627,435 bbls. at Sinco plant compared with 667,300 bbls. June 1. At Englewood tank farm is 1,327,276 bbls. At the Norsworthy storage farm of the Galena-Signal Oil Co. are 314,000 bbls. At Pasadena (Crown Central Oil Corp. refinery) are 291,625 bbls.

NEW SAKHALIN CONCESSIONS

Mr. Chujakoff, geologist in charge of the Russian scientific mission to North Sakhalin, is reported to have stated that Japanese firms are in treaty with the Chief Concessions Committee at Moscow for new oil concessions in North Sakhalin. The mission has been dispatched by the Soviet Government to conduct a surface and topographical survey, and to investigate and determine coal and oil occurrences on the east and west coasts of the island. It will also lay out the chessboard area of the oil concessions granted to Japan by the Peking agreement. The mission consists of 35 scientists and geologists, including—besides M. Chujakoff—Professors Mironov and Polievoi.

OIL TRADE IN PERSIA

The Anglo-Persian Oil Co. will shortly inaugurate a new effort to compete with Russian oil interests in the Persian market. Hitherto the immense road journeys from the southeast of Persia have precluded the Anglo-Persian Co. from competing with Russian oil from Baku, which had the advantage of the railway to Tabriz. The use of the new field at Naftkhanah, near Khanikin, on the Mesopotamian frontier, will, it is said, revolutionize the whole situation. In the near future Baku will cease to have a monopoly of the northern Persian retail trade, and the Persian public will have a chance to use their own oil at competitive prices.

Domestic Exports of Petroleum and Refined Products

		Month of June 1925	Month of June 1926	12 Mos. Ended June 1925	12 Mos. Ended June 1926
Crude petroleum	Gals.	51,958,494	51,468,077	621,175,086	590,992,499
	$	2,368,181	2,375,746	23,968,950	26,215,994
Total refined petroleum	Gals.	337,200,128	389,309,697	3,924,808,548	4,260,270,956
	$	36,061,090	43,004,578	297,521,273	462,859,172
Gasoline, naphtha and other light products	Gals.	111,726,325	155,830,433	1,217,930,141	1,589,551,815
	$	17,975,716	23,641,189	175,158,381	239,066,839
Illuminating oil	Gals.	69,346,282	67,080,721	892,267,121	886,111,373
	$	6,758,785	7,466,611	85,433,381	87,886,208
Gas and fuel oil	Gals.	124,780,472	124,176,395	1,433,542,658	1,381,540,720
	$	4,644,779	3,692,347	52,046,697	44,916,778
Lubricating oil	Gals.	31,093,857	40,747,778	377,401,995	394,266,907
	$	6,644,233	7,939,603	84,375,346	89,625,937
Other refined petroleum products	Gals.	253,192	1,474,370	3,666,633	8,800,141
	$	37,577	265,828	506,868	1,363,410
Paraffin wax	Lbs.	22,677,389	27,210,742	333,425,106	343,592,200
	$	1,246,957	1,517,938	17,964,938	19,262,626

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It is useless to wire, phone, write or send for copies of last week's issue of The Oil and Gas Journal—the big Semi-Annual Review of the oil industry in the first six months of 1926.

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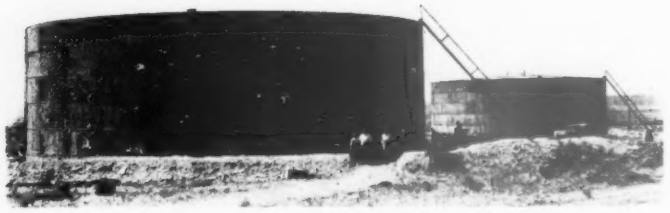

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OBTAINING CRESYLIC ACID IN PETROLEUM DISTILLATE

(Continued from Page 146)

necessary to add sufficient caustic to bring the NaHS up to Na_2S. When this was concentrated to a point indicative of 62 per cent Na_2S to suit commercial requirements for fused sodium sulfide, it was found that the residue of oily products was thoroughly mixed with and inseparable from the sodium sulfide. It was found, however, that if the concentration was stopped at a boiling point of 143° C., and the mix allowed to cool, there was a very sharp separation, with the oily products collected at the surface and sodium sulfide of commercial purity solidified below. At a temperature as much as 10° C. below or above this point, the separation was incomplete and the sulfide contaminated. After removing the impurities it was necessary to resume the concentration of the sodium sulfide, carrying the temperature to about 222° C. to produce the 62 per cent fused sodium sulfide of commerce.

The economy of the practices here described in refinery operation is dependent upon a great many factors, not the least of which is freight charges to possible consumers of the products; but a point not to be overlooked is the reduction in sewage pollution of small streams or larger bodies of water near city water supplies. The amount of cresylic acid of the grade described in Table II, which may be recovered by the methods here outlined, is in the neighborhood of 0.0067% per cent by volume of the pressure-still distillate treated.

*Reprinted from Industrial & Engineering Chemistry, official publication of American Chemical Society.

BALD HILL PROPERTIES BOUGHT BY McCULLOCH

The McCulloch Oil Co. of Okmulgee, Okla., last week purchased several producing properties in the Bald Hill district of Okmulgee County.

From the firm of Jolly & Ogg, of Muskogee, Okla., the following were purchased: One-half interest in the south half of the SW of Section 16-15-14; one-half interest in the north half of the NW of Section 21-15-14; and a full interest in the NE NE, Section 21-15-14. There are six wells producing from the Wilcox sand on these properties, and they are making a total daily production of 1,800 bbls. There are two wells drilling on the leases. The gravity of the oil produced is 42 degrees. The price paid to Jolly & Ogg is reported at $600,000 cash.

From Hyer & Selby, also of Muskogee, the McCulloch Co. purchased a one-half interest in the SW SW of Section 15-15-14. This lease has one well producing 250 bbls. from the Wilcox sand. One well is drilling on the lease. The price paid for this lease is $125,000 cash and an additional $25,000 to be paid in oil from the property.

VENEZUELA WELLS

British Controlled Oilfields, Ltd., has completed No. 112 in El Mene Field, Venezuela, one-half mile southeast from center of existing field. The well is producing from a depth of 1,170 feet and is flowing 500 bbls. daily through a ⅝-inch choke, 36.1 gravity oil. No. 116 El Mene has been completed flowing 2,000 bbls. daily from a depth of 1,060 feet.

STERLING CO. EXPANDS

OIL CITY, Pa., Aug. 7.—Sterling Oil Co. of Emlenton has purchased the gasoline distributing business of the Penn Maid Gasoline Co. of Kane. The Penn Maid gasoline will be replaced by products manufactured by the Sterling Oil Co. The latter company also is planning to erect another bulk station at Kane to augment its facilities which extend from Pennsylvania into New York, West Virginia, Ohio and Canada. It has three refineries at Oil City and Emlenton, Pa. and St. Mary's, West Va.

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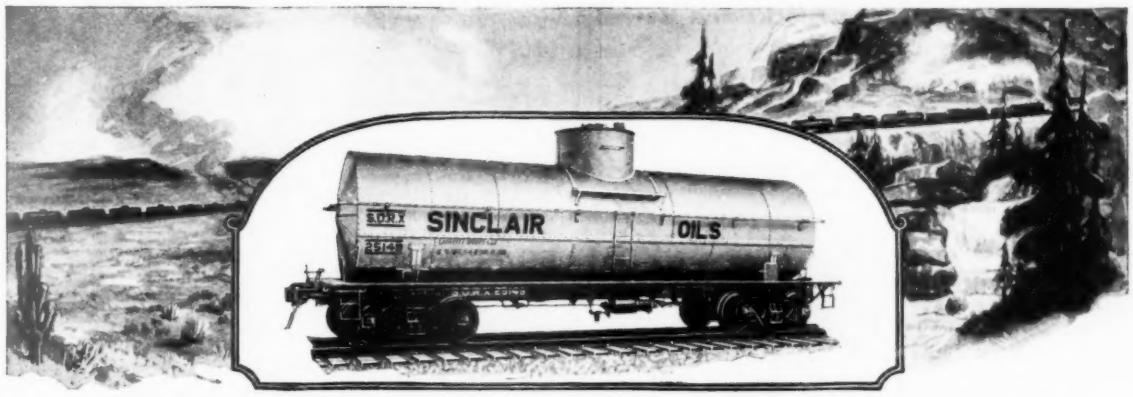

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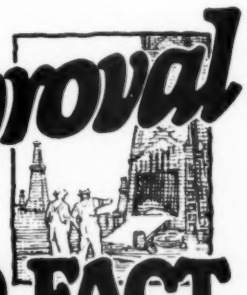

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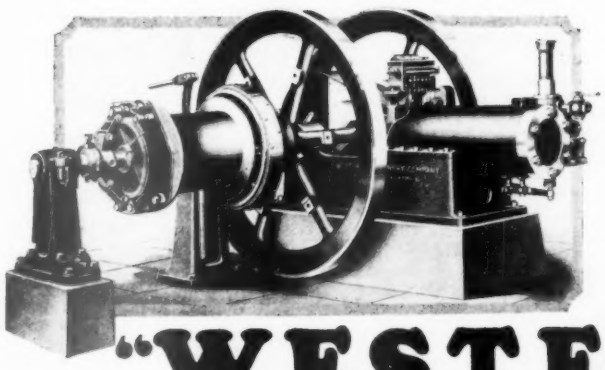

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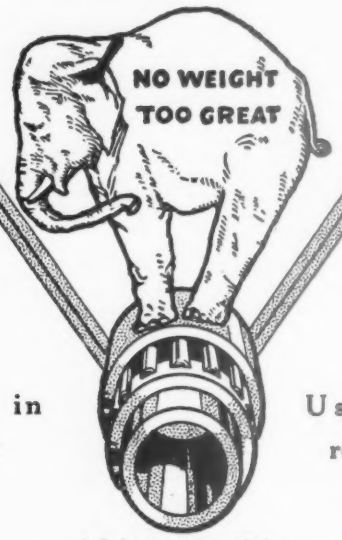

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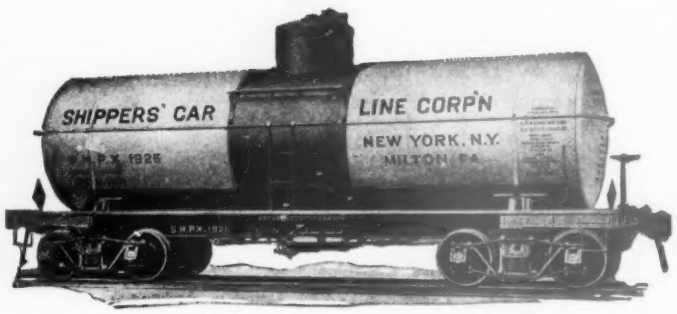

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OLD SPINDLETOP POOL HAS SPLENDID RECORD

In view of the interest now being displayed in the Spindletop Field, the following record of gross production will be interesting. The pool was discovered late in 1901 and reached its zenith during 1902, with a total of 17,420,940 bbls., or an average of 1,451,745 bbls. per month for the year. This would be a daily average of approximately 48,000 bbls. The daily average from the present 25 deep sand producers is over 62,000 bbls. so that the new area may produce as much oil if not more than did the old caprock in its peak days. All records of the early days are mere guesses. Wells were credited with 50,000 or 75,000 bbls. per day and no one questioned the estimates. Gushers were new to the fraternity of that day and consequently the estimates were wild.

The following table shows the estimated gross output of the pool from 1901 to 1925 complete and the first seven months of 1926:

Year—	Gross Bbls.
1901	3,593,113
1902	17,420,940
1903	8,600,905
1904	3,433,842
1905	1,660,379
1906	1,075,755
1907	1,613,513
1908	1,747,537
1909	1,388,170
1910	1,182,436
1911	965,929
1912	822,916
1913	716,374
1914	580,130
1915	388,286
1916	340,441
1917	308,039
1918	502,265
1919	464,285
1920	325,575
1921	320,051
1922	294,138
1923	324,795
1924	351,385
1925	*420,823
1926, first seven months	1,714,753

*Deep sand opened.

The first deep sand well by the Yount-Lee Oil Co. was on the southeast flank of the dome late in 1925, but the real well came in January 13 last flowing 5,000 bbls. at 2,780 feet. Later the same company got a flowing well on the Gladys across the dome on the northwest flank. The present period of activity there did not commence until 60 days ago. The gross production during the first six months of this year was 753,703 bbls. The total for July is 761,050 bbls., or 7,347 bbls. more than for the previous six months.

The figures are from the records of The Oil and Gas Journal.

OIL FIRE ADJUSTMENT

SAN FRANCISCO, Calif., Aug. 7.—The completed adjustment of the two oil fires at the Union Oil Co.'s farms at San Luis Obispo and Brea, on April 7 and 8, respectively, show that there were only 11 companies on the direct schedules of the risks in both places. The schedule on the crude oil in the reservoirs at both plants was for $7,117,000. The schedule on the crude naphtha called for coverage of $4,000,000. Crude oil amounting to 4,632,145 bbls. and crude naphtha 410,340 bbls. were destroyed by the two fires, resulting in a loss to the insurance companies of $6,623,882.94.

The adjustment reports of both fires show that the following total losses were suffered on the first insurance: Hartford Fire, $2,709,143.47; Queensland, $1,770,647.45; Duquesne Underwriters, $1,507,256.88; New Hampshire, $441,874.90; Globe and Rutgers, $261,560.42; London Underwriters, $94,332.19; Patriotic, $66,897.86; Vulcan Underwriters, $61,751.89; Phoenix Assurance, $61,754.88; Bankers and Shippers, $51,459.91; Home of New York, $47,166.09. Total, $6,623,882.94.

PERU'S PRODUCTION

President Leguia of Peru, in an interview said: "We are just beginning to discover our oil resources. A few years ago our total production was a few thousand tons. Last year we extracted 1,250,000 tons. We find that under our feet, from one end of the country to the other, is a great oil bath."

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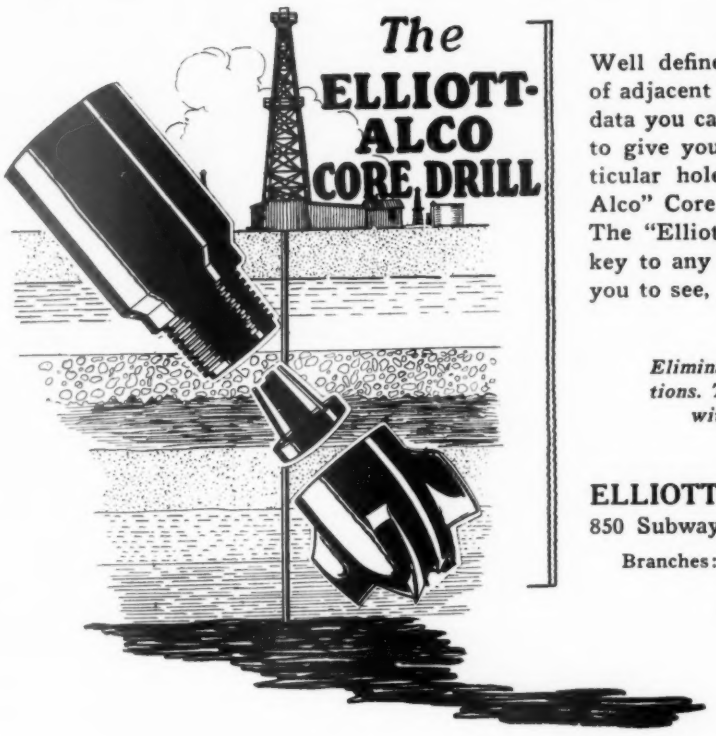

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New Questionnaires To Oil Companies by Federal Commision

The Federal Trade Commission, in pursuance to the resolution adopted by the United States Senate for an inquiry into the price of gasoline, has sent out a set of questionnaires to oil companies.

Among the questions are: Number of common and preferred stockholders, shares outstanding June 30, 1926, voting or non-voting; bonds outstanding; largest 50 stock holdings in voting stock at date of latest list; if any held as trustee or for the beneficial interest of any other person or company, give name, details of acquisition of property or stock of oil companies (producing, pipeline, refining, marketing or holding companies) since January 1, 1924, and per cent acquired; capital stocks of other companies held June 30, 1926.

A financial questionnaire calls for consolidated general and departmental profit and loss statements including subsidiaries, for the years 1922, 1923, 1924, 1925 and to June 30, 1926, giving specific gross revenue from operations; total operating revenues; costs; raw material and other costs; taxes; depreciation and depletion on original cost and additions; depreciation and depletion on revaluations; depletion of discovery value; total costs. Net profit from operations; miscellaneous income outside; interest and dividends from investments; miscellaneous interest received, other income. Deducting miscellaneous interest paid; interest paid on long term debt, amortization of discount and expense; other deductions. Net income, deducting Federal income taxes; net income to surplus. All this subdivided for each department of the industry.

Another form calls for the consolidated balance sheets including subsidiaries, showing assets, plant account, discovery value, other assets, less depreciation and depletion reserve, and net fixed assets. Current assets—cash; accounts receivable less reserve for bad debts; notes receivable less reserve for bad debts; inventories — oil, material, supplies, etc.; deferred charges and advance payments; investment in and advances to associated and affiliated companies; investment in other companies; unamortized discount and expense; other investments; good will, trademarks patents, etc.; other assets. Also for liabilities—capital stock, preferred and common; long term debt (including long term notes), accounts payable; notes payable; dividends declared but not paid; accrued liabilities; advances from associated and affiliated companies; reserves; Federal taxes; other reserves; surplus.

Still another questionnaire asks details on fixed assets—depreciation and depletion as of December 31, 1921, 1922, 1923, 1924, 1925, and June 30, 1926. This form also has blanks for each department of the industry calling for original cost, including additions and betterments; appreciation and revaluations added to original cost; depreciation on original cost and additions, on revaluations; depletion of discovery value; net book value at end of period.

A separate form asks for analysis of surplus account for each of the five periods, showing surplus first period, earned, by appreciation and revaluation; balance from profit and loss; other credits; dividends declared, preferred or common; other debits; surplus end of period, earned, by appreciation and revaluation.

Another form deals with capital stock issued and outstanding June 30, 1926. Amount issued, par value, amount issued for property, amount issued for services, amount issued as bonus, amount issued as stock dividends from appreciation and appraisals, amount issued as stock dividend from earned surplus, amount issued for other reasons, less stock retired or held in treasury. Amount outstanding June 30, 1926; total cash received for stock outstanding, total number of shares, par value; total cash dividends paid to June 30, 1926.

A statistical questionnaire asks for

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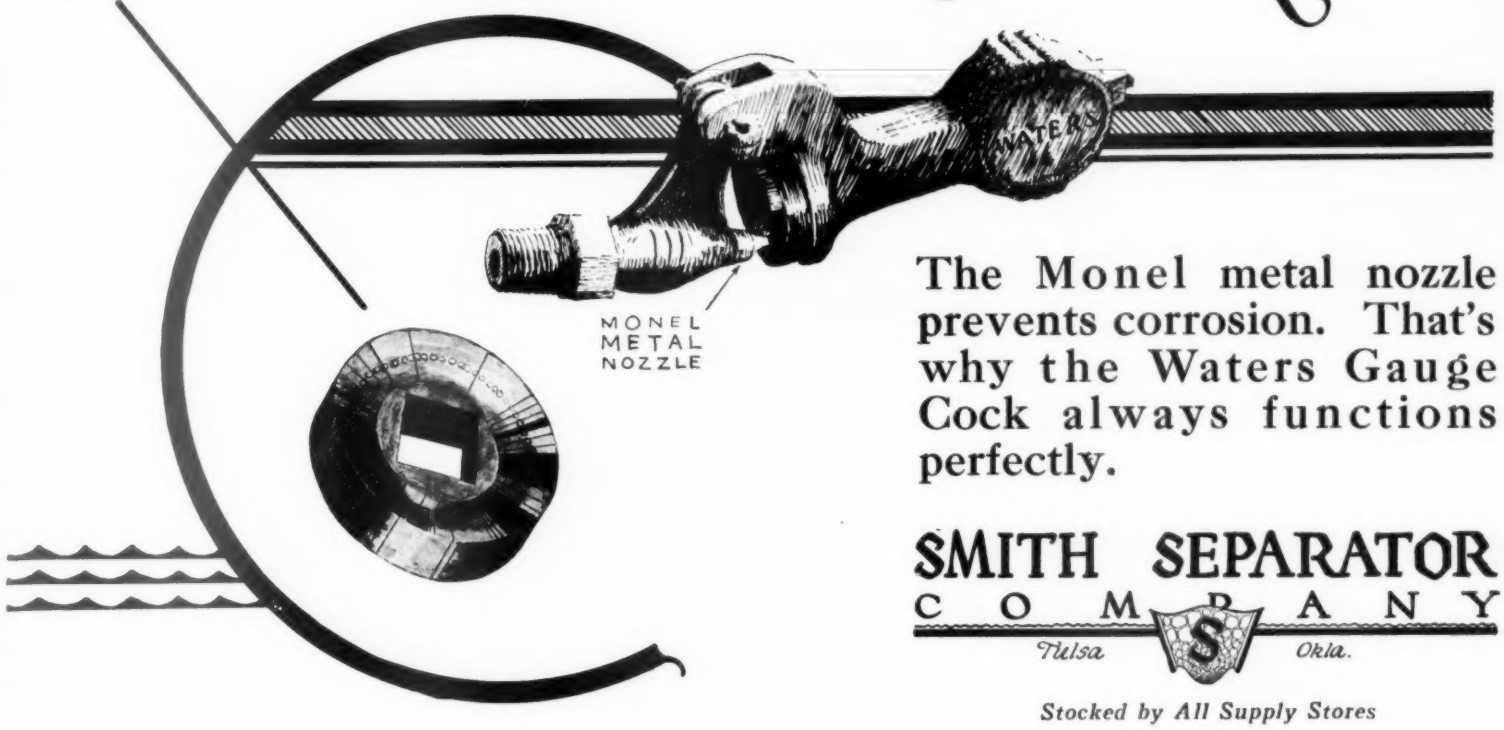

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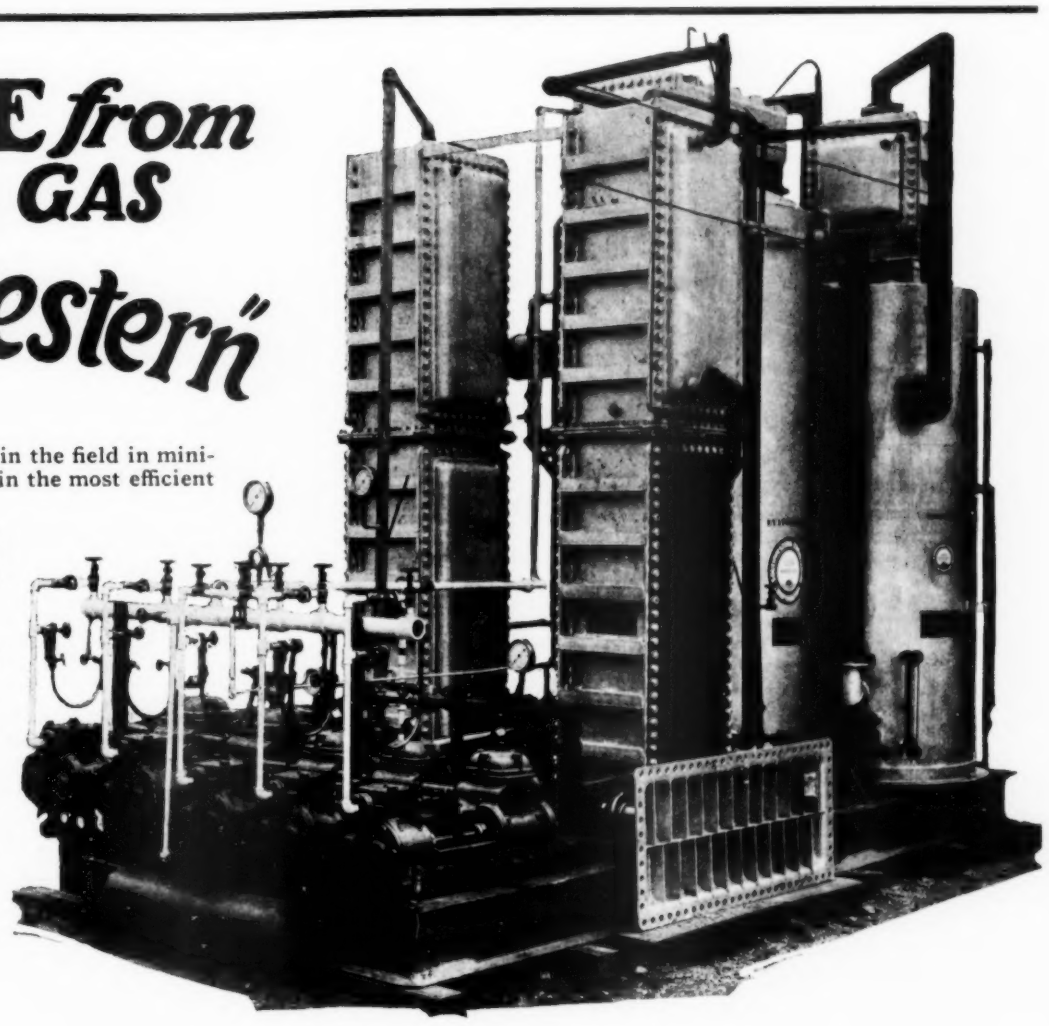

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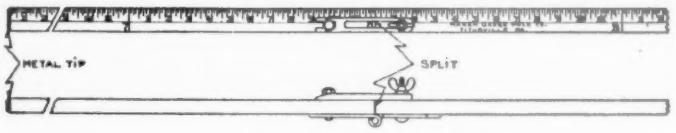

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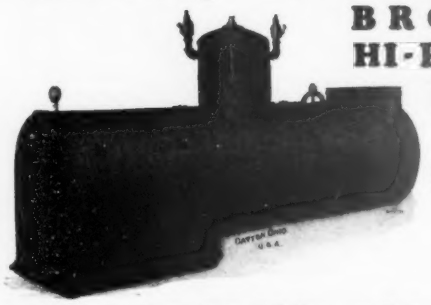

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quantity of crude produced, (own production—net), for the five periods; quantity of crude consumed at refineries, and location and capacity of refineries, skimming, cracking and total.

WILDCAT OPERATIONS IN TEXAS PANHANDLE FIELD

Carson County

Empire Gas & Fuel Co.'s No. 1 Burnett estate, drilling at 650 feet. Gibson Oil Corp.'s No. 1 Witter, shut down temporarily at 1,015 feet. Humble Oil & Refining Co.'s No. 1 Burnett-A, in the SW corner of Section 12, rigging up.

Collingsworth County

Gibson Oil Corp.'s No. 1 Williams and others, repairing pump at 520 feet. Martin and others' No. 1 Mrs. T. V. Norwood, building rig.

Dallam County

James and others' No. 1 fee, drilling at 2,720 feet in red shale.

Gray County

Bay Shore Oil Co.'s No. 1 C. W. Bradford, drilling at 1,855 feet. Blackwell & McGee's No. 1 Bowers, location. Canyon Oil Co.'s No. 1 Jackson estate, rig. Constantin and others' No. 1 Dial, drilling at 500 feet. Cranfill Brothers' No. 1 T. B. Noble, spudding. Eag'e Creek Oil Co.'s No. 1 Mrs. J. Hopkins, rigging up. Empire Gas & Fuel Co.'s No. 1 Benton, drilling at 300 feet; No. 1 B. Hughey at 620 feet; No. 1 J. J. Wall, underreaming 15-inch at 287 feet; No. 1 P. A. Worley, drilling at 290 feet. Jack Greenwood and others' No. 1 H. B. Lovett, spudded and shut down; Haughn and others' No. 1 A. J. Daur, cellar. Nabob Oil Co.'s No. 1 J. S. Morse, drilling at 461 feet. Shamrock Petroleum Co.'s No. 2 Merten, shut down for water at 2,275 feet. Wilcox-Pampa Oil & Gas Co.'s No. 4 Worley & Reynolds, drilling at 2,620 feet, first gas 2,590-2,610 feet; No. 6, drilling at 2,425 feet. Young and others' No. 1-A Holmes, running 12-inch casing at 440 feet.

Hansford County

F. W. Dillard and others' No. 1 F. A. Davis, rig.

Hartley County

Crane Oil Co.'s No. 1 Coots, new location. Deep Rock Oil Co.'s No. 1 Lyman & Balfour, shut down at 860 feet. Dorning and others' No. 1 A. C. Ashby, new location, rig on ground. Eslick and others' No. 1 J. B. Irving, spudding. W. H. Holmes' No. 1 G. B. Coots, drilling at 600 feet. Humble Oil & Refining Co.'s No. 1 J. M. Shelton, spudding. J. E. McKanna's No. 1 E. S. Collins, rigging up; No. 1 Francis Farwell and others also rigging up; No. 1 J. M. Shelton estate, rigging up. Kork Oil Co.'s (was Nutigate's) No. 1 J. M. Shelton estate, location. Breck Walker's No. 1 Stone, new locations.

Hemphill County

Hoover and others' No. 1 Schaller estate, still fishing for tools at 150 feet. Mitchell and others' No. 1 J. E. George, new location, rigging up.

Hutchinson County

Lee Flowers and Marland Oil Co.'s No. 1 Carver, shut down at 465 feet with engine trouble. Get Oil Co.'s No. 1 W. F. Allen, spudded and shut down. Gibson Oil Corp.'s No. 1 McCormick estate, drilling at 2,160 feet. Inspiration Oil Co.'s No. 1 Erle Thompson, drilling at 3,070 feet with 200,000 feet of gas at 2,985 feet. Western Development Co.'s No. 1 O. W. Jarvis, drilling at 1,580 feet.

Lipscomb County

Snyder and others' No. 1 A. Barton, drilling at 880 feet.

Moore County

Amarillo Oil Co.'s No. 1 Masterson-J, drilling at 1,075 feet; No. 2 Terry Thompson, drilling at 950 feet. Cadman and others' No. 1 J. T. Sneed, Jr., drilling at 1,440 feet. Shamrock Petroleum Co.'s (formerly Clark, Harbin & Baldridge's) No. 1 O. E. Gober, a rig. Douglas Oil Co.'s No. 1 H. W. Beauchamp, location. Lee Flowers and Marland Oil Co.'s No. 1 J. T. Sneed, Jr., shut down at 560 feet. Humble Oil & Refining Co.'s No. 1 Kilgore, new location. Phillips Petroleum Co.'s No. 1 Sneed had a very light show of oil at 2,874 feet and 100,-

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000 feet of gas at 2,877 feet and was drilling at 3,040 feet. Morton & Co.'s No. 1 H. C. Rubert, a rig. Prairie Oil & Gas Co.'s No. 2 Sneed, drilling at 1,680 feet. The Moore County Oil Co.'s No. 1 Sneed, drilling at 1,300 feet. Shadler Brothers' No. 1 John Lowry, new location, rig on ground.

Ochiltree County

W. G. Burton's No. 1 Stickler, shut down at 460 feet. McCorkle Pipe Line Co.'s (was Harris & Schaffer's) No. 1 R. H. Moore, shut down at 340 feet. Standard Development Co.'s No. 1 Bowden, spudded and shut down at 210 feet while a water well is being drilled.

Potter County

Amarillo Oil Co.'s No. 5 Lee-Bivins-A, drilling at 420 feet. The same company's No. 1 Fuqua, location. Farmers Oil & Gas Co.'s No. 1 J. A. Jones, a rig. Gulf Production Co.'s No. 1 W. H. Bush is drilling at 680 feet. Kelly & Harris' No. 1 Bush, new location.

Roberts County

Gibson Oil Corp.'s No. 1 T. S. Jones, spudding at 190 feet. Charles Page and others' No. 1 Hamilton, new location, rigging up. Pan-State Oil Co.'s No. 1 A. H. Tandy, new location, rig on the ground.

Sherman County

Eclipse Drilling Co.'s No. 1 Lee Bivins, was rigged up. Get Oil Co.'s No. 1 Bivins had a rig in place and so did the Phillips Petroleum Co. and Savoy Oil Co.'s (formerly Savoy Oil Co.'s) No. 1 C. Roach, it was shut down drilling a water well.

Swisher County

Overson & Keagan's No. 1 L. M. Woodward, shut down at 840 feet.

Wheeler County

Continental Oil Co.'s No. 1 W. C. Company, new location, drilling at 370 feet. Gibson Oil Corp.'s No. 1 W. E. Bentley, drilling at 1,450 feet; No. 2 H. C. Phillips, a rig. Mid-Kansas Oil & Gas Co.'s No. 1 W. C. Company, rigging up. Midwest Exploration Co.'s No. 1 Shelton had 10,000,000 feet of gas at 2,080-2,100 feet, a show of oil at 2,135-40 feet and was drilling at 2,160 feet. Murchison & Fain's No. 1 Binkley & Cain, a rig; No. 1 Binkley & Cain-A, location; No. 1 Close, location. Scott & Barner's No. 1 J. H. Jackson, underreaming 10-inch at 1,300 feet. Smith and others' No. 1 W. J. Johnson, location. Smith, Brady and others' No. 1 P. J. Sorenson, drilling at 312 feet. Upham Gas Co.'s No. 1 Cody, building rig. No. 1 fee, shut down at 2,000 feet with 30,000,000 feet of gas at 1,880-2,000 feet, rig pulled down; No. 1 Griswald, location; No. 1 Newton, spudding. E. L. Woodley, Jr.'s No. 1 Woodley, Sr., shut down at 660 feet.

NEW OIL ENGINE

William B. Whaley, engineer, who for 18 years has been working on new type oil engine now nearing completion at Sun Shipbuilding & Dry Dock Co., Chester, Pa., says an engine weighing 68,000 pounds, is now developing 517 horsepower, but will not be put on exhibition until 800 horsepower output is reached in about two months. It is claimed the weight will be lowered to 45,000 pounds, or about half the weight of present engines in tugboats and other small craft. It is also expected larger units will be turned out in about two years for ship propulsion, producing a motorship that will sell for $100 a ton that will excell in efficiency and economy any of present Diesel types. The best price now is $125 a ton, and few are available at that figure, comparing with about $100 a ton for a cargo steamer of ordinary size. Smaller marine units, says Mr. Whaley, for tugboat use, and the like, will cost only $40,000, compared with $100,000 or more for Diesels of similar power. It is expected, he says, that the first unit will be on the market in January. It will be of 4-cycle type. It is claimed it will have same manoeuvering ability as steam: will start smoothly, and will run without noticeable vibration or noise from the lowest to highest speed.

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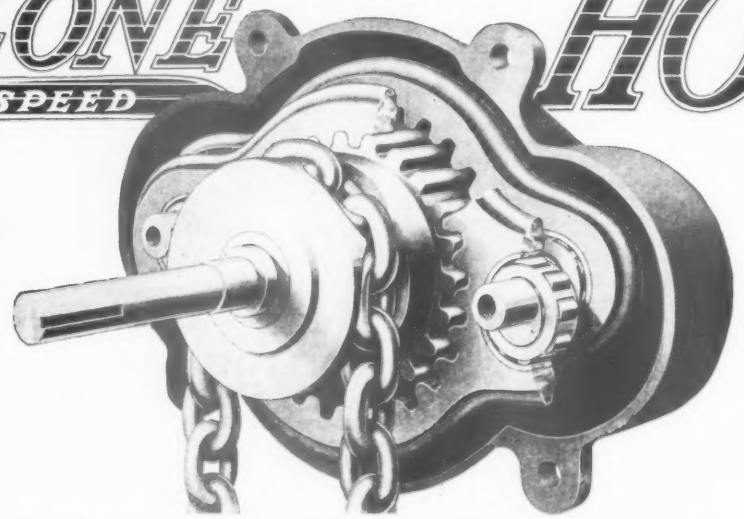

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Detailed Operations in Eastern Fields for July

EASTERN FIELDS

Summaryy of Wells Completed

Field—	Comp.	Prod.	Dry	Gas
Allegany	27	55	2	1
Bradford	115	300	3	0
Middle Field	3	12	0	0
Venango-Clarion	28	28	3	1
Butler-Armstrong	10	5	2	5
Southwest Pennsylvania	23	142	5	13
West Virginia	85	1,463	20	27
Southeast Ohio	105	737	25	16
Total July	396	2,742	60	63
Total June	426	1,763	41	55
Difference	30	979	19	8

Fields—	Rigs	Drg.	Ttl.
Allegany	15	22	37
Bradford	22	115	137
Middle Field	1	7	8
Venango-Clarion	5	18	23
Butler-Armstrong	4	17	21
Southwest Pennsylvania	11	34	45
West Virginia	47	166	213
Southeast Ohio	48	117	165
Total July 31	153	496	649
Total June 30	130	503	633
Difference	23	7	16

WELLS COMPLETED
ALLEGANY FIELD

Heseltine, Atwood & Stebbins ..... dry
Heseltine, Atwood & Stebbins 1
Dean, F. Austin 1
Clark, L. E. Norton et al 1
Clark, L. E. Norton et al 1
Morse, McKean Natural Gas ..... gas
Taylor, Dusenbury et al ..... dry
Reid, Agt., Cuba National Bank and First Trust Co., Wellsville 5
Reid, Agt. Helen Randall 5
Fee, Empire, Ltd. 2
Fee, Empire, Ltd. ..... water
Fee, Empire, Ltd. ..... water
Fee, Albert Oil 2
Burdick, B. A. Vossler et al 1
Fee, C. C. Brennan et al ..... water
Fee, Isaac Willitts Est. 1
Fee, J. E. LeSuer et al 1
Royce et al, Jennings et al 1
Coast & South Penn Oil, F. C. Shaner et al 5
Fee, M. J. Crowley et al 8
Fee, Hazelwood Oil 2
McDevitt, E. J. Phillips et al 2
Crandall, Whiteman & Crandall 2
Cass, F. J. Wilson 4
Fee, A. C. A. Oil Corp. 1
Perkins, W. J. Lobaugh, Tr. 1

Wells completed 27
Production 55
Dry 2
Gas 1
Water 3

BRADFORD FIELD

Vincent heirs, S. H. Elder et al 17 2
Moore, Pure Penn Oil 10 1
Rew, Bovaird & Hanley 15 8
Bing, 296, Andrus & McDowell 10 2
Bing, 331, George W. Bovaird 82 2
Bing, 401, J. E. Ward 15 1
Ring, 380, Wilson & Fitzgibbon 80 2
Bing, 389, D. W. Daly 43 1
Bing, 369, D. W. Daly 57 1
Bing, 500, Daly & Healy 30 1
Bing, 490, T. H. Kennedy No. 2, 140 2
Bing, 437, Park & Bovaird 37 1
Bounds & Lawrence, South Penn Oil 55 10
Weston, Jr., Tr., South Penn Oil 93 10
Redfield et al, South Penn Oil 105 8
Fee, M. C. Roat 15 2
Bing & Andrus, B. P. Brown et al 9 2
Fee, L. G. Dana 21 1
Franchot, H. & J. G. Shannon 12 2
Fee, Hazelwood Oil 47 ..... water
Fee, Hooker et al 6 ..... water
Franchot, Penn Brook Oil 19 2
Franchot, Melvin & Towne 9 5
Fee, T. B. Wilson 10 2
Fee, T. H. Kennedy 19 1
Fee, C. H. Kervin 2
Fee, South Penn Oil 4
South Penn Oil, Thomas Scroxton & Son 3
Fee, Forest Oil, Inc. 2
Fee, South Penn Oil 3
Bing, 150, South Penn Oil 68 3
Bing, South Penn Oil 67 4
Fee, Kaber & Kaber 36 1
Bing, Hazelwood Oil 119 5
Bing, Hazelwood Oil 122 6
Fee, W. C. Kennedy Co. 53 5
Bing 151, South Penn Oil 30 1
Dent fee, South Penn Oil 102 3
Hallenbeck et al, W. Jackson et al 31 6
Fee, W. N. Hunter et al 33 2
Bing, 188, Harris Oil 32 6
Fee, A. Stover 3
Fee, R. O. Landers 2
Bing, 399, South Penn Oil 3
Bing, 427, Scofield & White 2
Bing, 440, South Penn Oil & Hazelwood 15 5
Bing, 410, South Penn Oil 38 2
Bing, 370, Hazelwood Oil 72 ..... water
Bing, 370, Hazelwood Oil 73 3
Bing, 582, Associated Producers 372 12
Bing, 590, P. A. Oakes & Son 24 5
Bing, Satt., 576, South Penn Oil 111 1
Bing, 494, South Penn Oil 53 6
Bing, 533, South Penn Oil 83 4
Fee, Gridiron Oil 3
Fee, Gridiron Oil 3
Morse, Jos. Minnich Est. 1
Hanes, Coast & Storms 2
Borden, T. P. Thompson 1
Borden, T. P. Thompson 1
Fee, J. H. Hifler 1
Meldrum, Wilborg et al 3
Howard, Pressure Oil 5
Borden, Pressure Oil 2
Jones, South Penn Oil 2
Jones, South Penn Oil 2
Middaugh, South Penn Oil 2
Borden, T. B. Wilson 2
Mott, Reclamation Oil 8
Mott, Reclamation Oil 5
Mott, Reclamation Oil 3
Borden, C. J. Mitchell 2
Baldwin, C. B. Kervin 1
Keating, Sloan & Zook 3
Keating, Sloan & Zook 3
Kapp, T. H. Kervin, Jr. 1
Russell, Potter & Devore 2
Keating, J. B. Randall 2
Sanderson, A. Schorman ..... dry
Borden, John Franks 1
Cronk, C. E. Potter ..... dry
Marvin, A. L. & L. M. Lilly 2
Duke, M. B. Oil 4
Duke, M. B. Oil ..... dry
Borden, W. A. Boales 1
Borden, C. E. Piper 2
Burns, A. J. Douglas et al 1
Baldwin, A. J. Douglass et al. 1
Baldwin Forest Oil 1
Baldwin, Forest Oil 1
Porter, Forest Oil 1
Porter, Forest Oil 1
Taggert, Jeutter Bros. & Mitchell 1
Shenfield, W. J. Frederick 1
Hodge, South Penn Oil 1
Sill, Hope Oil 1
Pratt, Petroleum Reclamation 1
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Pratt, Petroleum Reclamation 1
Whipple, South Penn Oil 1
Enterprise, South Penn Oil 1
Ekas, Lloyd & Piper 1
Ekas, Lloyd & Piper 1
Ekas, Lloyd & Piper 1
Rew, F. D. Gallup et al 1
Monroe, DeVore et al 1
Fee, W. J. Healy 1
Fisher, M. E. Jones 1
Fee, B. Devlin 1
Bingham, B. B. Oil 2
Pratt, Korner Bros. 2
Bingham, Paul Evans et al 4
Bingham, J. L. Yerdon 2
Elder, S. H. Elder & Co. 4
Wright, Wright & Johnson 1

Wells completed 115
Production 300
Dry 3
Water 3

MIDDLE FIELD

T. & W., A. E. & W. C. Thompson 76 1
Rogers, F. H. Trax 1
Osten, Rembold et al 6 10

Wells completed 3
Production 12

VENANGO-CLARION

Friggle, Friggle Bros. 60 1
Blair, Reeves & Franklin Trust 47 1
Hovis, Hovis, Surrena et al 27 1
Craig, Fritz Craig et al 1 1
Murphy, Taylor, Torrey, L. J. Kirkwood 24 1
Button, J. B. Smithman 40 ..... gas
Button, J. B. Smithman 41 1
Peebles, J. A. Marthaler 8 1
T. C. L. & P. Co., Pyle, Price et al 66 1
Houser, Exchange Bank, Franklin 82, 8 1
Crawford, Crawford, Gregory, Woodburn & Co. 78 2
Sparks, Nickle & O'Brien 17 1
Cross, H. J. Hoffman 17 1
McKee, C. L. Irwin 41 1
Plumer, Eakin & Hutchison 44 1
Donaldson, Donaldson, McDowell et al 6 1
McNellie, Midland Oil Corp. 18 1
McNellie, Midland Oil Corp. 19 1
Seaton, C. W. Seaton 24 2
Baum, J. P. Mansfield 8 1
Clarion—
Kapp, Alum Rock Gas 2 1
Marshall, Agnew & Co. 1 ..... dry
Farmington Twp., Phillips & Co. 1 ..... dry
Gilbrel, Samuel Gribel 3 2
Knappenberger, Knappenberger, Thomas et al 3 2
Campbell, H. Johnson et al 1 ..... dry
Black, W. A. Jeannerat 3 1
Kapp, Alum Rock Gas 1 1

Wells completed 28
Production 28
Dry 3
Gas 1

BUTLER-ARMSTRONG

Plunckard, J. S. Walker 1
Wick Est., Chambers Oil ..... gas
Griffith, E. C. Griffith ..... dry
Dulity, Boyle, Little & Co. 1 2
Abrams, Pickard & Albaugh 4 2
McLafferty, McBride & Co. 1 ..... dry
Dewey Est., Dewey Trust Co. 2 ..... gas
Kamerer, S. H. & O. G. Kammerer 1 ..... gas
Stamp, Stamp & Co. 1 ..... gas
Worley, O. Shoup et al 1 ..... gas

Wells completed 10
Production 5
Dry 2
Gas 5

ALLEGANY FIELD
Rigs

White et al., Empire, Ltd.
Fee, Albert Oil.
Fee, Empire, Ltd.
Fee, Empire, Ltd.
Fee, J. E. LeSuer et al.
Fee, Citizens National Bank No. 62.
Fee, M. J. Crowley et al.
Coast & South Penn Oil, M. J. Crowley et al.
Coast & South Penn Oil, F. C. Shaner et al.
Fee, W. T. Lain et al.
Fee, Gill'gan & Dermitt.
Crandall, Whiteman & Crandall.
Corbins, W. H. Lobaugh, Tr.
Congdon, First National Bank of Cuba.
Fee, Charles Phillips.

Wells Drilling

Herrick, E. C. Garthwait et al.
Fee, McKean Natural Gas.
Fee, C. M. Barnes et al.
Fee, F. H. Raymond et al.
Fee, State Bank of Bolivar No. 28, 29.
Fee, Empire, Ltd.
Fee, Empire, Ltd.
Fee, Albert Oil.
Fee, Phillips & Howard.
Birtcill, W. E. McMurdy et al.
Fee, F. L. Williams.
Fee, R. J. McDermitt.
South Penn Oil, A. D. Reeland et al.
Fee, J. W. Johnson et al.
Fee, Hazelwood Oil.
Fee, C. W. Means.
Fee, L. A. Wilson.
Fee, A. L. & L. M. Shaner.
Cass, F. J. Wilson.
Kinley Oil, W. J. Weller et al.
Fee, A. C. A. Oil Corp.
Claire, Neal A. Crandall.
Rigs, 15; wells drilling, 22, total, 37.

BRADFORD FIELD
Rigs

Bing, 497, Park & Bovaird 38.
Bing, 490, T. H. Kennedy No. 2, 142.
Winsor, Wilson & Co. 18.
Fee, Forest Oil, Inc., 124, 128, 131.
Franchot, H. & J. G. Shannon 13.
Franchot, W. J. Oliver 1.
Griffith et al, C. S. Knabb, Tr.
Bing, Hazelwood Oil 124, 125.
Fee, W. C. Kennedy Co. 54.
Hedlund, Diament & Co. 1.
Kennedy & Clark, Phoenix Oil 163.
Bing, 370, Hazelwood Oil 75.
Bing, 423, South Penn Oil 14.
Bing, 582, Associated Producers 375.
Bing-Satt, 576, South Penn Oil 114.
Bing, 582, Associated Producers 375.
Bing-Satt, 576, South Penn Oil 114.
Bing, 570, South Penn Oil 113.
Bing, 194, South Penn Oil 54.

Wells Drilling

Lawton, Gallup & Elder et al 26.
Moore, Pine Penn Oil 11.
Vincent heirs, S. H. Elder et al 18.
Rew, Bovaird & Hanley 16.
Bing, 388, C. L. Vaughn et al 51.
Bing, 391, Geo. W. Bovaird 18.
Bing, 373, Howard & McCallum 89.
Bing, 431, J. A. Hooper 6.
Bing, 430, Lane No. 1 et al 71.
Bing, 490, T. H. Kennedy No. 2, 141.
Biag, 369, D. W. Daly 58.
Bing, 500, Daly & Healy 31.
Bing, 411, R. M. & James George 28.
Weston, Jr., Tr., South Penn Oil 94.
Rounds & Lawrence, South Penn Oil 56.
Burns, et al, Krampf & McCandless 20.
Forest Oil Corp. et al., Forest Oil, Inc., 8.
Redfield et al, South Penn Oil 106.
Fee, M. Hungiville 25.
Fee, T. H. Givan 12.
Fee, E. L. & F. J. Shippey 11.
Slugston et al, Parker Farm Oil 10.
Fee, F. M. Johnston & Son 22.
Franchot, F. M. Johnston & Son 25.
Fee, Hazelwood Oil 47.
Fee, Hooker et al 6.
Franchot, R. A. Delo et al 15.
Franchot, Maxwell Bros. 17.
Fee, Dana & Dana 43.
Fee, T. B. Wilson 11.
Fee, C. B. Kevin.
Fee, South Penn Oil.
Forest Oil, Inc., W. P. Brinton.
Fee, South Penn Oil 35.
Bing, Hazelwood Oil 123.
Grimm, J. W. Abrams 3.
Fee, South Penn Oil 41.
Fee, Hilliard & Dodge 20.
Fee, W. N. Hunter et al 34.
Brown, Hungiville et al.
Fee, Barry Estate 8.
Miller Bouton & Snyder 6.
Fee, South Penn Oil 187.
Kennedy & Clark, Phoenix Oil 162.
South Penn Oil, E. K. Kane 44.
Bing, 188, Harris Oil 33.
Fee, A. Stover 12.
Bing, 399, South Penn Oil.
Bing, 425, Grant & Mohan 11.
Bing, 482, South Penn Oil 25.
Bing, 439, South Penn Oil 99.
Bing, 370, Hazelwood Oil 74.
Bing, 501, South Penn Oil 16.
Bing, 568, Associated Producers 374.
Fee, Gridiron Oil (2 wells).
Morse, Jos. Minich.
Hanes, Coast & Storms.
Borden, T. P. Thompson.
Meldrum, Wiborg et al.
Howard, Pressure Oil.
Keller, Hifler & Sprague.
Mott, Petroleum Reclamation (2 wells).
Kearing, Sloan & Zook (2 wells).
Saunderson, A. Schorman.
Borden, John Franks.
Barvin, A. L. & L. M. Lilly.
Duke, M. B. Oil (15 wells).
Borden, C. E. Piper.
Burns, A. J. Douglas et al.
Baldwin, A. J. Douglas et al.
Baldwin, Forest Oil.
Porter, Forest Oil (2 wells.)
Shenfield, W. J. Frederick.
Hodge, South Penn Oil.
Sill, Hope Oil.
Pratt, Petroleum Reclamation (3 wells).
Enterprise, South Penn Oil.
Ekas, Lloyd & Piper (3 wells).
Rew, F. D. Gallup et al.
Monroe, DeVore et al.
Fee, W. J. Healy.
Lovell, Melvin et al.
Gormley, Korner Bros.
Garlock, Denwood Oil.
Looker, Petroleum Reclamation.
Murphy, Wilson et al.
Gremer, Linwood Oil.
Fisher, Forest Oil.
Wright, Wright & Jonson.
Bingham, H. E. Camp Est.
Emerson, G. L. Rhodes et al.
Bingham, Paul Evans et al.
Bingham, Paul Evans, et al.
Bingham, J. L. Yerdon.
Rigs, 22; wells drilling, 115; total, 137.

MIDDLE FIELD
Rigs

Lot 269, Pennsylvania Gas 946.

Wells Drilling

King, E. Pequignot 14.
Lot 3767, F. J. Moser 31.
Lot 385, Kane Oil 43.
Irvine, Hague & Co. 45.
Ulf, Fidelity Petroleum 1.
Northrop, Knopf & Chapman.
Siggins, H. A. Siggins.
Rigs, 1; wells drilling, 7; total, 8.

VENANGO-CLARION
Rigs

McKinley, Baird & Uber et al 24.
Seaton, W. C. Seaton 25.
Kapp, Kapp Bros. 2.
Clarion—
Wolbert, Wilson & Co. 1.
McCleary, C. P. McCleary 3.

Wells Drilling

Foster H. C. Foster 58.
Fisher, F. S. Gates 19.
Myers, Grove, Main et al 16.
Breed, O'Bail Oil 20.
Fulmer, Andrews et al 15.
Bowman, National Petroleum.
Adams, Jones & Greene 14.
Myers, Craig, Hoffman et al 14.
Atwell, Hoffman, Craig & Co. 31.
McCalmont, Peoples National Bank and Williams, 10.
Plumer, Eakin & Hutchison 45.
McNellie, Midland Oil Corp. 20.
Keverline, Dempsytown Gas and Keverline 1
Shawkey, Alum Rock Gas 1.
Clarion—
Gabler, Gatesman & Co. 1.
Wentling, H. E. Rugh 4.
Garis, Alum Rock Gas 6.
Carl, S. R. Lewis et al 1.
Rigs, 5; wells drilling, 18; total, 23.

BUTLER-ARMSTRONG
Rigs

Boggs heirs, R. C. & W. V. Binkerd.
Morgan, I. N. Johns.
Neel lease No. 2, Dufford, Vensel et al 2.
Peters, L. D. Berry 1.

Wells Drilling

Kriess heirs, J. E. Dufford et al 1.
Wagner heirs, E. C. Hatcher et al 1.
Hoffman, Jewell & Co. 3.
Sentz, Battenfelder & Co. 1.
Selders, Battenfelder & Co. 1.
Peters, Chas. Devlin 1.
Shaner & Beilstein, Shaner & Co. 4.
Holben, Ritzert Bros. & Co. 1.
McBride, McBride & Co. 4.
Bryan, Armstrong & Ruby 6.
Trees, J. C. Trees 2.
McGill, M. Garvin et al 2.
Stewart & Co., Stewart & Co. 3.
Campbell, M. W. Graham et al 8.
Glenn, Carl Hilliard et al 7.
Jack, Sherwin & Burns 1.
McGarvey, Sherwin, McGarvey et al 2.
Rigs, 4; wells drilling, 17; total, 21.

SOUTHWEST PENNSYLVANIA
WELLS COMPLETED
WASHINGTON COUNTY

Tyler Tube & Pipe Co., E. Tague & Co. 1 ..... dry

ALLEGHENY COUNTY

Wallace, Parker & Co. 4 2
Baker, Schenck & Co. 1 ..... dry
Casley, Robinson Bros. 1 ..... dry
Duthil, D. H. Say 10 ..... gas
Willeby, Pinkerton & Co. 1 4
Elliott, Elliott & Co. 1 1
Dean, McClay & Co. 1 ..... dry

GREENE COUNTY

Murriner, Peoples Gas Co. 1 ..... gas
Wright, Carnegie Gas Co. 1 ..... gas
Bowers, Carnegie Gas Co. 1 ..... gas
Kennedy, Carnegie Gas Co. 1 ..... gas
Sicklesmith, J. L. Garard 5 ..... gas
Sicklesmith, J. L. Garard 15 ..... dry
Hennen, Mfrs. L. & H. Co. 2 ..... gas
Lantz, So. P. O. Co. 9 ..... gas
Smith, N. G. Co. of W. Va. 5 5
Hamilton, Meales & Co. 2 ..... gas
Conklin, Phila. O. Co. 1 ..... gas
Hopkins, Mfrs. L. & H. Co. 1 ..... gas
McClelland, Carnegie Gas Co. 1 ..... gas
Rutan, N. G. C. of W. Va. 4.
Phillips, Sutton & Co. 1 ..... gas

Wells completed 23
Production 142
Dry 7
Gas 13

WASHINGTON COUNTY
Wells Drilling

Andrew, Mfrs. L. & H. Co. 1.
Wier, Carnegie Gas Co. 1.

ALLEGHENY COUNTY
Wells Drilling

Ferguson, Ferguson & Co. 1.
Hart, Christ Hart 1.
Thornburg, Thos. McDermott 1.
Dean, Pinkerton & Co. 1.
Kirsh heirs, Mellin & Pollock 1.

BEAVER COUNTY
Wells Drilling

Dawson, G. L. Dawson estate 3.

GREENE COUNTY
Rigs

Headley, So. P. O. Co. 3.
Neill, Carnegie Gas Co. 1.
Caseman, Caseman O. & G. Co. 1.
Anderson, Consumers Fuel Co. 2.
Rutan, Consumers Fuel Co. 2.
Powers, Consumers Fuel Co. 1.
Rutan, Carnegie Gas Co. 4.
Baldwin, Carnegie Gas Co. 1.
Rutan, N. G. Co. of W. Va. 5.
Rutan, N. G. Co. of W. Va. 6.
Reese, Moore & Co. 1.

Wells Drilling

Harris, Carnegie Gas Co. 1.
Wade, Carnegie Gas Co. 2.
Lantz heirs, Carnegie Gas Co. 1.
Lemley heirs, Fox O. & G. Co. 1.
A. Fox, Phila. Oil Co. 1.
Williamson, Phila. Oil Co. 1.
Hendersan, Federal Oil & Gas Co. 1.
Dunkard O. & G. Co., Vance & Co. 1.
Williamson, Geo. Vance & Co. 1.
Sickelsmith, Garard & Co. 16.
Clovis heirs, Mfrs. L. & H. Co. 4.
Clovis, Clovis & Co. 2.
Smith, Eddy & Co. 1.
Main, Covert Bros. 1.
Webster, N. G. of W. Va. 1.
Smith, N. G. of W. Va. 1.
Chess, McCracken & Co. 1.
Berdine, Dunn Mar. O. & G. Co. 3.
Moore, Phila. Oil Co. 1.
Graham, Phila. Oil Co. 1.
Pettit, Phila. Oil Co. 2.
Pettit, Phila. Oil Co. 3.
Huffman, Phila. Oil Co. 2.
Jacobs, Phila. Oil Co. 7.
Stockdale, Mfrs. L. & H. Co. 1.
A. Rutan, Consumers Fuel Co. 2.
Shape, Carnegie Gas Co. 1.
Reese, Carnegie Gas Co. 1.
J. S. Rutan, Carnegie Oil Co. 3.
Scott, Carnegie Gas Co. 3.
Tripp, Carnegie Gas Co. 1.
Rigs, 11; Wells drilling, 34; total, 45.

SOUTHEASTERN OHIO
MONROE COUNTY
Wells Completed

Scott, Carner & Co. 4 3

PERRY COUNTY

Roberts, Keller Bros. & Co. 23 2

Rogers, Bros., Holden & Co. 23 3
Paston, Holliday O. & G. Co. & Co. 5 .. 20
Franklin Bank, Ohio F. S. Co. 5 20

HOCKING COUNTY

Anthony, Gordon Oil Co. 5 ..... dry
Marlow O. & G. Co., Griffin Prod. Co. 4 gas
Mowery, Maysville O. & G. Co. 1 100
Blair, Uhl O. & H. Co. 1 5
H. V. P. Co., Chartiers Oil Co. 200 5
Sunday C'k. C. Co. Sunday C'k. Co. 137 10
Stacy, Shores & Co. 4 ..... dry

HOLMES COUNTY

Carpenter, East Ohio Gas Co. 1 ..... dry
Moritz, East Ohio Gas Co. 4 ..... dry
Middaugh, Leonard O. & G. Co. ..... gas
Netherow, Empire G. & F. Co. 2 65
Donnell, Empire G. & F. Co. 1 ..... gas
Close, Pure Oil Co. 2 50

GUERNSEY COUNTY

Ford, Ohio F. G. Co. 2 ..... gas
Steel, Ohio F. G. Co. 1 ..... gas
Williams, Logan Gas Co. 4 ..... gas
Adams Township Lot, Keith & Co. 1 ... gas

LICKING COUNTY

Stair, Edmonds & Co. 8 3
Ferry, Ohio F. S. Co. 3 6
McKinney, Rugg & Co. 6 20
Pound, Farmer & Co. 4 ..... dry
Weiss, Denbow & Co. 7 1
McKinney, North Fork O. Co. 27 5
Varner, Leonard Oil Co. 1 ..... gas
Hoover Bros., Leonard Oil Co. 4 5
Baughman, Brown & Co. 1 4
Moran, Metzger & Co. 1 ..... gas
Dugan, Ark. F. O. Co. 8 3
Davidson, Margaret Oil Co. 1 4
Orr, Smith, Hazleton & Co. 5 4
Franks, Detex O. & G. Co. 7 4
Tavener, Pat Oil Co. 1 2
Tavener, Pat Oil Co. 2 2
Wolf, Moore & Adams 2 5
Rogers, Spindler & Donaldson 2 3
Porter, E. H. Everett Co. 4 40
Bogle, Midland Oil Co. 2 ..... dry
Hupp, Midland Oil Co. 1 ..... dry
Cooperrider, Midland Oil Co. 3 ..... dry
Weekly, Planet Oil Co. 5 25
Cartnal, Pure Oil Co. 2 20

COSHOCTON COUNTY

Torney, Ohio F. G. Co. 1 ..... dry
Mossholder, Murphy Oil Co. 2 70
Wright, Kemrow Oil Co. 1 ..... dry
Rine, Preston Oil Co. 1 70

FAIRFIELD COUNTY

Kittle, Nixon & Co. 1 ..... gas

ATHENS COUNTY

Lax, Harmon & Co. 1 1
Hewitt, F. L. Gunther 1 1
Biddle heirs, Biddle O. & G. Co. 4 4
Whaley, Beesley & Co. 10 7
State Hospital, Gross & Co. 2 8
Walsh, Cook & Co. 1 2
Walburn, Gordon Oil Co. 1 2
Beckley, Cooperative O. Co. 2 6
Jones, Clark & Co. 1 2

MORGAN COUNTY

Davis, J. U. Davis 17 1
Davis, J. U. Davis 18 2
White, Daily Oil Co. 1 ..... dry
Pletcher, Swingle O. & G. Co. 8 ..... gas
Smith, Pure Oil Co. 8 6
Fry, Pure Oil Co. 10 10
Kirkwood, Sun Oil Co. 1 5
Spurrier, Bowman O. & G. Co. 1 ..... gas
Joy, Ohio F. G. Co. 2 ..... gas
Woolman, Ohio F. G. Co. 1 ..... gas
Williams, Pure Oil Co. 3 15
Williams, Pure Oil Co. 4 5
Epley, Ohio F. S. Co. 3 10

MEIGS COUNTY

Snowball, Benedict & Co. 1 ..... gas
Inman, Meigs-Summers O. & G. Co. 1 .. dry
Jividen, W. N. Holmes 3 5
Yost heirs, Pure Oil Co. 4 4

NOBLE COUNTY

Brown, Yerain & Co. 4 ..... dry
Carpenter, Myers & Co. 1 ..... dry
Ginn, Jewell & Co. 5 1
Boyde, Rucker & Co. 4 ..... dry
Shafer, Sheets & Co. 1 ..... dry
Watson, Ohio F. S. Co. 1 ..... gas

WASHINGTON COUNTY

Warren, Warren & Co. 1 3
Smith-Britton, Smith, Britton & Co. 1 .. 2
Newland, Dailey & Co. 4 ..... dry
Reeder, Peoples B. & T. Co. trus. 45 ... 1
Rowland, Lawrence & Co. 1 ..... dry
Heldman, Heldman & Co. 1 ..... dry
Rohr, Rohr Oil Co. 2 ..... dry
Young, Becker & Co. 5 ..... dry
Gitchell heirs, Henderson Oil Co. 4 .. 10
Thebold, Shankland & Co. 1 ..... dry
Hupp-Murray, Beeson & Athey 11 1
Schramm, Clymer & Co. 4 4
Jackson, Marietta & Co. 12 ..... dry
Wolfert, Meister & Co. 14 ..... dry

JEFFERSON COUNTY

Tarr heirs, Talbot & Co. 1 5
Boyce & Co., W. L. Graves 8 15
Edmonston, Tope & Co. 7 3

BELMONT COUNTY

Jeffers, Hamilton & Co. 1 5
Bumgardner, N. G. Co. of W. Va. 2 ... dry

HARRISON COUNTY

Finnical, Crane & Co. 1 10

COLUMBIANA COUNTY

Teeters, Benninghoff & Co. 13 1
Thomas, McDonald & Co. 5 1

Wells completed	105
Production	737
Dry	25
Gas	16

MONROE COUNTY
Wells Drilling

Adams, Simmons & Co. 1.
Haught, H. A. Hendershot 5.
Bode, H. L. Timbling 11.

PERRY COUNTY
Rigs

Sunday C'k. C. Co., Sunday C'k. C. Co. 138.
Cookson, Ralph Brothers 2.
McCullogh, Hope C. & R. Co. 1.
Melick Brothers, Atha Oil Co. 13.
Ardry, Atha Oil Co. 4.
Wells Drilling
Thomas, Pure Oil Co. 1.
Sunday C'k. C. Co., Sunday C'k. C. Co. 2.
Friehl heirs, Perry Sturm 1.
Dye, Cline Brothers 1.
Butts, Leonard O. & G. Co. 1.
Allen, Leonard O. & G. Co. 1.

HOCKING COUNTY
Rigs

Noble, Gordon Oil Co. 2.
Brimmer, Gordon Oil Co. 3.
Stone, Gordon Oil Co. 5.
Thrush, Cline, Vinsel & Co. 2.
Wyskiver, Preston Oil Co. 2.
Murphy-Hogan, Kachermacher est. 5.
Poston, Ohio F. S. Co. 1.
Tucker, Griffin Prod. Co. 1.
Hazleton heirs, Big Ten O. & G. Co. 3.
Dauley heirs, Bell & Shull 1.
Wells Drilling
Meleriam, Gordon Oil Co. 2.
Kitchen, Gordon Oil Co. 2.
Thrush, Tauber O. & G. Co. 2.
Funk, Calico Ridge O. & G. Co. 1.
Tracy est., Kachelmacher est. 22.
Wolfe, Chartiers Oil Co. 3.
Houston, Kachelmacher est. 1.
Marlow O. & G. Co., Griffin Prod. Co. 5.
Linton, Preston Oil Co. 1.
Guess, Duncan & Co. 3.
H. V. P. Co., Chartiers Oil Co. 198.
Crawford, Matins Oil Co. 1.

HOLMES COUNTY
Rigs

Mohr, East Ohio Gas Co. 1.
Allison, Ohio F. G. Co. 1.
Patterson, Leonard O. & G. Co. 1.
Purdy, Pure Oil Co. 1.
Smitheiger, Ohio Oil Co. 1.
Netherow, Empire G. & F. Co. 3.
Findley, Empire G. & F. Co. 1.
Miller, Pure Oil Co. 3.
Wells Drilling
Miller, East Ohio G. Co. 1.
Middaugh, East Ohio G. Co. 1.
Snow, Kemrow Co. 1.
Shanklan, Ohio F. G. Co. 1.
Miller, Ark. F. O. Co. 3.
Steel, Empire G. & F. Co. 1.
Close, Empire G. & F. Co. 3.
Uhl, Pure Oil Co. 1.
Close, Pure Oil Co. 3.
Cullens, Kemrow Co. 1.
Anderson, East Ohio Gas Co. 5.
Allison, East Ohio Gas Co. 1.
Hastings, East Ohio Gas Co. 2.
Marquis, Pure Oil Co. 3.
Snyder, Pure Oil Co. 2.

GUERNSEY COUNTY
Rigs

McHaffey, Ohio Fuel G. Co. 1.
J. N. McHaffey, Ohio Fuel G. Co. 1.
Ford, Ohio Fuel G. Co. 1.
O'Brien, Ohio Fuel G. Co. 1.
Summerfronk, Ohio Fuel G. Co. 2.
Turner, Ohio Fuel G. Co. 1.
Ford, Ohio Fuel G. Co. 3.
Ruby, Ohio Oil Co. 1.
Wells Drilling
Girles, Ohio D. G. Co. 1.
Shriver, Ohio D. G. Co. 1.
Williams, Ohio D. G. Co. 1, 2.
Lepage, Ohio D. G. Co. 1.
Rankin, Ohio F. G. Co. 1.
Speer, Ohio Oil Co. 2.
Oliver, Ohio Oil Co. 1.
J. S. Speer, Ohio Oil Co. 2.
Buks, Logan Gas Co. 1.
Morrison, Matthews & Co. 2.
Medley, Big Lime Oil Co. 1.
Purdum, Cambridge Gas Co. 1.
White, Leonard O. & G. Co. 1.
Fulton, Steltz & Co. 1.
McCoy, Keith & Co. 1.
Wayne Mining Co., Detroit-Edison Co. 1.

LICKING COUNTY
Rigs

Meade-Mayberry, Meade & Co. 1.
Montgomery, Ark. F. O. Co. 4.
Burns, Wehrle Brothers 2.
Wells Drilling
Leonard & Co., Pure Oil Co. 5.
Swytzer, E. H. Everett Co. 2.
McKinney, Rugg & Co. 7.
Hayes, Weidman & Co. 1.
Burkholder, Decker & Co. 1.
Hall, Decker & Co. 1.
McKinney, North Fork O. Co. 28.
Bodle, Ohio Fuel Co. 1.
Myers & Co., Leonard O. & G. Co. 6.
Vanwinkle, Margaret Oil Co. 1.
Noland, Brown & Co. 1.
Mizer, Pure Oil Co. 1.
Hall, Ark. F. O. Co. 1.
Franks, Detex O. & G. Co. 8.
Wolf, Moore & Adams 3.
Ingman, Wehrle Brothers 4.
Delling, Wherle Brothers 1.
Sinsabaugh, Midland Oil Co. 1.
Armstrong, Flint Ridge O. & G. Co. 6.
Uffner, Hope C. & R. Co. 1.
Laughman, Pure Oil Co. 6.
Michael, Pure Oil Co. 3.

MUSKINGUM COUNTY
Rig

Michael, A. H. Heisey Co. 2.
Wells Drilling
Moore, Pure Oil Co. 2.
Irwin, Pure Oil Co. 1.
Boyer, M. F. Whitehill 2.

COSHOCTON COUNTY
Rig

McKee, Spindler, Doman & Co. 4.
Wells Drilling
Moore, Dairy & Co. 1.
Byers, Ohio Oil Co. 2.
McFarland, Ohio F. S. Co. 3.
Howell, Ark. F. O. Co. 1.
Mossholder, Murphy Oil Co. 3.

FAIRFIELD COUNTY
Rig

Shaw, Hufford & Co. 1.
Well Drilling
Thompson heirs, Thompson heirs 1.

KNOX COUNTY
Rigs

Durbin, Ohio F. S. Co. 1.
Strouse, East Ohio Gas Co. 1.
Wells Drilling
Neaton, Pure Oil Co. 3.
Lewer, Ohio F. S. Co. 1.

ATHENS COUNTY
Wells Drilling

Williams, Ohio F. G. Co. 1.
Wood, Renhausen & Co. 5.
Irwin, Gross & Co. 2.
Biddle heirs, Biddle O. & G. Co. 5.

MORGAN COUNTY
Rigs

Eppley, Pure Oil Co. 12.
Mendenhall, Thornly & Co. 7.
Williams, Pure Oil Co. 5.
Eppley, Ohio F. S. Co. 4.
Wymer, Thornly & Co. 7.
Wells Drilling
Pletcher, Swingle O. & G. Co. 9.
Hughes, Pure Oil Co. 7.
Mendenhall, Swissville O. & G. Co. 1.

MEIGS COUNTY
Rigs

Yost heirs, Pure Oil Co. 5.
Capehart, Penna. Berea Co. 1.
Wells Drilling
Singer, Meigs-Summers Gas Co. 1.
Burdette, Coal Hollow O. & G. Co. 1.

NOBLE COUNTY
Wells Drilling

Williams, Herds O. & G. Co. 4.
Hille, Harper & Co. 1.
Harper, Wicken & Co. 7.
Marquis, Hendershot & Co. 3.
Keifer heirs, Ohio F. S. Co. 1.

WASHINGTON COUNTY
Rig

Pool, Dailey & Co. 1.
Wells Drilling
Longfellow, Wash.-Nelbe Gas Co. 1.
Bosworth heirs, Todd & Co. 2.
Epler, Beeson & Co. 2.
Smith, Henderson Oil Co. 10.
Heintzelman, Harris & Co. 1.
Kiggins, Grau & Co. 4.
Edwards, Forrest O. & G. Co. 7.
Wagner, Wepler & Co. 2.
Schmidt, Patterson & Co. 5.
Williams, Carner & Co. 1.
Pfaff, Lowery Bank 17.
Wharton, Ward & Co. 1.

JEFFERSON COUNTY
Rig

Blackburn, Turner & Co. 7.

BELMONT COUNTY
Wells Drilling

Ferguson, N. G. Co. of W. Va. 3.
Taylor heirs, N. G. Co. of W. Va. 1.
Shepherd, Ferguson & Co. 9.

CARROLL COUNTY
Wells Drilling

Harrington, N. G. Co. of W. Va. 2.
Dorremco heirs, Brown & Co. 1.

COLUMBIANA COUNTY
Well Drilling

Davidson, J. N. Davidson 6.
Rigs, 48; wells drilling, 117; total, 165.

WEST VIRGINIA
WELLS COMPLETED

LEWIS COUNTY

Malley, Hope Gas Co. 1 ..... dry
Wells, Carnegie Gas Co. 2 ..... gas
Brinkley, Pgh. & W. Va. G. Co. 1 ..... dry
Smith, Smith & Co. 1 1

HARRISON COUNTY

Williams, Johnston & Co. 1 ..... gas
Williams, Johnston & Co. 1 ..... gas
Flint heirs, Southern Oil Co. 4 2

MONONGALIA COUNTY

Wright, Carnegie Gas Co. 1 ..... dry
Shuman, Philadelphia Oil Co. 4 ..... gas
Thomas, Hope C. & R. Co. 1 ..... gas

WETZEL AND TYLER COUNTIES

Peterson, John Gas Co. 6 5
Kuhen, Hope C. & R. Co. 1 1
Hostattler, Mfrs. L. & H. Co. 2 1
Teagarden, Carnegie Gas Co. 2 ..... gas
Wilkin heirs, Orndoff & Co. 4 ..... gas

MARSHALL COUNTY

Ritter, Mfrs. L. & H. Co. 1 40
Bonar, Decem Dev. Co. 6 ..... gas
Conaway, Carnegie Gas Co. 7 ..... dry
Rusia, Hicks Oil & Gas Co. 1 ..... gas
Rogerson, Wasmuth & Callan Oil Co. 1 dry
Howard heirs, G. B. Peterson ..... gas

DODDRIDGE COUNTY

Ford, Trainer & Travis 1 3
Sutton, Carnegie Gas Co. 1 ..... gas
Shrader, Carnegie Gas Co. 4 ..... gas
Smith, Clifton O. & G. Co. 2 ..... gas

RITCHIE COUNTY

Kelly, Carnegie Gas Co. 3 ..... gas
W. Va. tract, Burk Bros. 22 3
Bowie heirs, Meadow Rub Oil Co. 2 ... 40
Atkinson, So. P. Oil Co. 4 414
Jamison, So. P. Oil Co. 2 15
Atkinson, Rinehart & Co. 1 450
Mitchell, Rinehard & Co. 325 .....
Mullinax Bros., Loomis & Co. 1 ..... gas

GILMER COUNTY

Cain, Snyder & Deems 1 ..... dry

WIRT COUNTY

Rathbone Oil Tract, Robert Bros. 116.. 2

UPSHUR COUNTY

Heavner, Union Gas Co. 1 ..... gas

BRAXTON COUNTY

Bennett heirs, Pgh. W. Va. G. Co. 2... dry
Miller, Ohio Fuel Oil Co. 1 ..... dry
Bard, Ohio Fuel Oil Co. 1 ..... dry

WOOD COUNTY

McAtee, O. E. Grow 7 2
McAtee, O. E. Grow 8 5
Northorp, D. E. McClure 2 ..... dry
Smith-Goldish, Smith & Goldish 3 ..... dry
Redfox, Hoglan Oil Co. 1 ..... dry
Drain heirs, Henderson Oil Co. 12 1
Grant, So. P. Oil Co. 19 10
Elgie Grant, Congdon & Woodyard Oil Co. 11 5
Bartimus, Four S O. & G. Co. 1 1
Snyder, Pleasant Hill O. & G. Co. 1 .. 6
Rost, White Sand Oil Co. 3 6

PLEASANTS COUNTY

Graham heirs, Dividend O. & G. Co. 1 .. 5
Cook, Everson Oil Co. 35 25
Hart, Cunningham & Co. 1 ..... dry
Elliott, Stout & Co. 1 ..... dry
Varner, Adam Ward 12 3
Tredway, Walnut Run Oil Co. 1 ..... dry

ROANE COUNTY

Cottle, Hock Oil Co. 1 15
Young, Suter & Co. 1 ..... gas
Webb, G. L. Cabot 1 ..... gas

CALHOUN COUNTY

Wolverton, W. M. Bickel 1 ..... gas
Parsons, Hope C. & R. Co. 2 5
Stalnaker, Phila. Oil Co. 1 ..... dry

CLAY COUNTY

Stockly, So. P. O. Co. 20 35
Stockly, So. P. O. Co. 23 150
Kyle, So. P. O. Co. 2 30
Kyle, So. P. O. Co. 3 20
Belcher, So. P. O. Co. 4 20
Belcher, So. P. O. Co. 6 15
Belcher, So. P. O. Co. 7 10
Parker, So. P. O. Co. 1 25
Casto, 220 a., Ohio Fuel Oil Co. 10 50
Casto, Ohio Fuel Oil Co. 11 20
Brown & Co., Virginian O. & G. Co. 8.. 25
Bethel M. E. Church lot, Reed & Stevenson 1 2
Noe-Vandall, United Fuel Gas Co. 1 ... gas

LINCOLN COUNTY

Lawson, Grant Gas Co. 2 ..... gas
Bragg, Cambridge Gas Co. 1 ..... gas

KANAWHA COUNTY

Cobb, U. F. G. Co. 1 ..... gas
Young, U. F. G. Co., 1 ..... gas

PUTNAM COUNTY

Joyce, Texas Prod. Co. 1 ..... dry
Pine, Kirtley & Keller 2 ..... dry
Jones, Kirtley & Keller, 1 ..... gas

CABELL COUNTY

Collins, Sweetland & Co. 1 ..... gas
Walton, Walton O. & G. Co. 5 ..... gas
Merritt, Shipe & Co. 1 ..... dry
Gillenwater, Meahon & Huffman 1 ..... gas

WAYNE COUNTY

Caldwell, Old Colony Oil Co. 1 1

Wells completed	85
Production	1,463
Dry	20
Gas	27

LEWIS COUNTY
Rigs

Clark, West Fork O. & G. Co. 1.
M. E. Parsonage Lot, Frye & Co. 1.
Wells Drilling
Davisson, Mud Lick O. & G. Co. 1.

HARRISON COUNTY
Rigs

Westfall, J. W. Johnson 1.
Wells Drilling
Rogers, Hoffmier & Deegan 2.
Martin, Hope Gas Co. 1.
Williams, Conservation Oil Co. 3.
Smith Bros., Reserve Gas Co. 1.
Fitro, S. L. Horner 1.
Davisson, Vesper O. & G. Co. 2.
Shepler, Vesper O. & G. Co. 1.
Lewis, Hope Gas Co. 1.
Payne, Hope Gas Co. 1.
Stone, Hope Gas Co. 1.
McQuarter, Hope Gas Co. 1.

MARION COUNTY
Wells Drilling

Thorn, Owens B. & M. Co. 2.
Toothman, Owens B. & M. Co. 1.
Amos, Hope Gas Co. 1.
Hibbs, S. N. Elliott 3.
Thorn, Carnegie Gas Co. 1.
Snyder, Clifton O. & G. Co. 3.

MONONGALIA COUNTY
Wells Drilling

Eakin, Pgh. & W. Vo. Gas Co. 1.
Shuman, Carnegie Gas Co. 3.

WETZEL AND TYLER COUNTIES
Rigs

Eddy, McIntyre Bros. 1.
Stump, Mfrs. L. & H. Co. 2 .
Hostattler, Carnegie Gas Co. 2.
Wickham, Morgan Bros. O. & G. Co. 1.
McGinnis, H. L. Lambert 8.
Wells Drilling
Antil, Johns Gas Co. 7.
Fox, Mfrs. L. & H. Co. 1.
Ritter, Hope C. & R. Co. 6.
Wade, Carnegie Gas Co. 1.
F. M. Wade, Carnegie Gas Co. 3.
Kimble, Kimble O. & G. Co. 1.
Jolliffe, Phila. Oil Co. 2.
Parker & Co., Sugar Camp Oil Co. 1.
Gale heirs, Samuel Gale 12.
Pitts, Amer. O. & R. Co. 15.
Carney, Hope C. & R. Co. 1.
ONeal, Local Co. 1.
Stump, Mfrs. L. & H. Co. 3.
Anderson, Carnegie Gas Co. 2.
Virden, Cameron O. & G. Co. 1.
Rice, Albert Neely 1.
Tuttle, Hope C. & R. Co. 7.

MARSHALL COUNTY
Rigs

Keller, Mfrs. L. & H. Co. 7.
Campbell, Conway & Co. 1.
Jochum, Spider O. & G. Co. 1.
Thomas heirs, Mfrs. L. & H. Co. 3.
Wells Drilling
Calvert, Mfrs. L. & H. Co. 1.
Marison, Burgess & Co. 1.
Newman, Wood & Co. 1.
Teagarden, Mfrs. L. & H. Co. 2.
Baker, Decum Dev. Co. 1.

DODDRIDGE COUNTY
Rigs

Stattler, W. D. Gribble 1.
Metzgar, C. H. Pigott 5.
Yeater, Mfrs. L. & H. Co. 2.
Smith, Hope C. & R. Co. 6.
Wells Drilling
Ford, Buckeye O. & G. Co. 1.
Ross, Trainer & Travis 1.
Roberts, Bell O. & G. Co. 1.
Smith, Hope Gas Co. 2.
Spencer, Clifton O. & G. Co. 1.
Smith, Trainer & Co. 1.

RITCHIE COUNTY
Rigs

Nutter, Hope Gas Co. 1.
Camden, Hope Gas Co. 1.
Batson, Carnegie Gas Co. 2.
Beck, Pgh. & W. Va. G. Co. 1.
Nutter, Pgh. & W. Va. G. Co. 1.
W. Va. Tract, Whitewood Oil Co. 29.
Hickman heirs, Roberts & Co. 1.
Rex, Roberts Oil Co. 2.
Anderson, Big Sand Oil Co. 2.
Lowther, Oakdale O. & G. Co. 10.
Wells Drilling
Fairview M. E. Church Lot, Bickerstaff & Co. 1
Prunty, Cain Run O. & G. Co. 4.
McGosh heirs, Wilson & Co. 1.
Miller heirs, Hope Gas Co. 3.
Ehret, Hope Gas Co. 4.
Dotson, Nay & Kintzer 1.
Howell, Moore & Co. 1.
Mason, P. A. McDonough 1.
Realty Co., Astron Oil Co. 4.
Phillips, Mellon Brothers 1.
Volcanic Tract, Power Oil Co. 111.
Jamison, So. P. O. Co. 3.
Mitchell, Rinehart & Co. 3.
Dawson, Rinehart & Co. 2.
Templeton, Swingle Oil Co. 1.
Metz, J. Starcher 2.
Atkinson, Rinehart & Co. 2.
Atkinson, So. P. O. Co. 7, 8.
Bradford, Rice O. & G. Co. 3.
Hardwick, Hardwick Oil Co. 2.
Pierpoint, J. F. Deem 1.
Maze, A. O. D. Co. 3.

GILMER COUNTY
Rigs

Tierney, Jas. Tierney 3.
Bartlett, Phila. Oil Co. 1.
Wells Drilling
Fling, A. E. Ellis 2.

WIRT COUNTY
Wells Drilling

Deweese heirs, Southern Oil Co. 1.
Rathbone Oil Tract, Roberts Bros. 147.

UPSHUR COUNTY
Rigs

Willfong, Edgell O. & G. Co. 1.
Williams, Hughes Oil Co. 1.

BRAXTON COUNTY
Rigs

Covee, Pgh. & W. Va. Gas Co. 1.
Wells Drilling
Doolins, Pgh. & W. Va. Gas Co. 1.
Snodgrass, Mill Fork O. & G. Co. 1.
Bennett heirs, Pgh. & W. Va. Gas Co. 3.

WOOD COUNTY
Wells Drilling

Sowling, Mixer & Co. 1.
Harris, Big Run Oil Co. 5.
Wharton, So. P. O. Co. 4.
Brum, Jonas & Park Oil Co. 1.
Grant heirs, So. P. O. Co. 4.

PLEASANTS COUNTY
Wells Drilling

Delong, Delong Farm O. & G. Co. 3.
Colvin, Big Sand Oil Co. 1.
Noland, Hill & Co. 1.

ROANE COUNTY
Rigs
Connelly, Heck Oil Co. 3.
Wells Drilling
Summers, Clifton O. & G. Co. 3.
Burroughs, Heck Oil Co. 4.
Warren, Heck Oil Co. 3.
Brown, Ohio Fuel Oil Co. 2.
Adams, Douglass Bros. 2.
Harless, G. L. Cabot 2.

CALHOUN COUNTY
rigs
Richards, Chemical Oil & Gas Co. 1.
Wells Drilling
Pell-Newman, Federal O.l & Gas Co. 4, 33.
Board, Euclid Oil & Gas Co. 3.
Stalnaker, McCall & Co. 1.
D. Stalnaker, Phila. Oil Co. 4, 5.
Stump heirs, Bickel & Co. 7.
Ward, G. L. Cabot 1.

CLAY COUNTY
Rigs
Stockly, So. P. O. Co. 25, 32.
Belcher, So. P. O. Co., 8, 9, 10.
Casto, Ohio Fuel Oil Co., 12.
Hall, Ohio Fuel Oil Co. 2.
Casto, Virginian G. & O. Co. 14.
Davenport, Virginian G. & O. Co. 2.
Wells Drilling
Stockly, So. P. O. Co. 24, 26, 27, 28, 29, 30, 31, 33.
Kyle, So. P. O. Co. 8, 9, 10.
Casto, Virginian G. & O. Co. 13.
Brown, Swan & Co., Virginian G. & O. Co. 11
Brown, Swan & Co., Virginian G. & O. Co. 14
Davenport, Virginian G. & O. Co. 3.
School Lot, Morley O. & G. Co. 1.
Keen, Elkins O. & G. Co. 4.
Osborne, Empire Petroleum Co. 2.
Samples, Eastern S. B. Co. 2.
S. Samples, Eastern S. B. Co. 2.
S. Samples, Chalmers O. & G. Co. 2.

MASON COUNTY
Rigs
McMillan, Ohio F. O. Co. 2.

LINCOLN COUNTY
Rigs
Horse C'k. L. & M. Co., Col. G. & E. Co. 3.
Wells Drilling
Egnor, Col. E. & G. Co. 1.
Horse C'k. L. & M. Co., Col. G. & E. Co. 2.
Linville, Cambridge Gas Co. 3.
Wade, Cambridge Gas C. 3.
Goldsarth, So. P. O. Co. 1.
Pike heirs, Tampico O. & G. Co. 8.

KANAWHA COUNTY
Rigs
Wherle, U. F. G. Co. 1.
White, Snyder & Co. 1.
Bird, United Carbon Co. 4.
Wells Drilling
Fogarty U F. G. Co. 1.
Osborne, U. F. G. Co. 3.
Woods, U. F. G. Co. 1.
King, U. F. G. Co. 1.
Mullen, U. F. G. Co. 1.
Cobb, U. F. G. Co. 3.
Hunt, Empire Petroleum Co. 2.

BOONE COUNTY
Wells Drilling
Bedford heirs, U. F. G. Co. 11.
L. R. & P., Pure Oil Co. 26.
Williams Coal Co., Pure Oil Co. 227.
Wilson, Pure Oil Co. 1.
Coon, Pure Oil Co. 2, 4.
Federal C. & L. Co., Pure Oil Co. 10.
Williams Coal Co., Pure Oil Co. 226.
Casingham, Owens B. & M. Co. 12.
Peyton C. & L. Co., Owens B. & M. Co. 9.
Little C. & L. Co., Owens B. & M. Co., 4.
Coal River M. Co., Owens B. & M. Co. 29.
Thompson & Co., G. L. Cabot 1.
Laurel Creek F. Co., G. L. Cabot 1.
Lewis, G. L. Cabot 1.
Nelson L. & C. Co., G. L. Cabot 4.
Cole-Crane, Pond Fork O. & G. Co. 3.
White & Co., Halstead & Co. 1.
Meadows, Halstead & Co. 1.
Coon & Co., Hickman Prod. Co. 2.
Banks, Ira G. Sayer, 1.

LOGAN COUNTY
Wells Drilling
Guyan Merchants Co., Warock O. & G. Co. 2.
Dingess Rub. C. Co., Warock O. & G. Co. 13, 14.

PUTNAM COUNTY
Wells Drilling
Parker School Lot, Shannon & Co. 1.

CABELL COUNTY
Wells Drilling
Reynolds, Aetna O. & G. Co. 2.
Chaney, Aetna O. & G. Co. 2.
Harshbarger, Harshbarger O. & G. Co. 1.
Finley, Monicle Gas Co. 1.
Browning, C. C. Wolf & Co. 1.
Wetherholt, Far & Figley 1.

MINGO COUNTY
Rigs
Logan Canel C. Co., Old Colony Oil Co. 18.
Wells Drilling
Costerman Est., Old Colony Oil Co. 12.
Logan C. C. Co., Old Colony Oil Co. 17.

WAYNE COUNTY
Wells Drilling
McGhee, Chartiers Oil Co. 1.
Rigs, 47; wells drilling, 166; total, 213.

LIMA FIELD

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Tl.
Wood	10	189	0	0	0	6	6
Hancock	6	138	0	0	0	9	9
Allen	4	50	0	0	0	5	5
Auglaize	5	13	3	0	0	2	2
Sandusky	5	51	0	0	0	4	4
Mercer	6	29	0	1	0	7	7
Seneca	1	30	0	0	0	1	1
Lucas	1	18	0	0	0	2	2
Ottawa	2	30	0	0	0	4	4
Shelby	7	58	0	1	0	6	6
Hardin	2	125	0	0	0	4	4
Darke	2	90	1	0	0	1	1
Paulding	0	0	0	0	2	1	3
Clark	0	0	0	0	0	1	1
Wyandot	1	40	0	0	0	2	2
Lima Field	52	861	4	2	2	55	57
Michigan	5	95	1	0	7	21	28
Total July	57	956	5	2	9	76	85
Total June	61	708	6	2	2	73	75
Difference	4	248	1	0	7	3	10

LIMA FIELD
WELLS COMPLETED
WOOD COUNTY
Plain—M. Lamb, Eckler & Collins 16.. 5
A. C. McDonald, No. 2, Ohio Oil 24.. abd
Bloom—L. S. Whitacre, Maxwell & Harkness 33 25
L. Whitacre, Maxwell & Harkness 33 50
Liberty—E. E. & J. H. Abbott, Hulse & Kundtz 1 1
J. G. Bernard, Ohio Oil 1, 2 ..... abd
Portage—Buckeye Pipe Line Co., Ohio 2, 4 ..... abd
Thos. Reese, Ohio Oil 1 ..... abd
Perrysburg—Chas. Thaiss, Oko Oil & 1 52
Chas. Thaiss, Oko Oil & Gas 2 18
J. J. Hileman, Oko Oil & Gas 1 25
J. J. Hileman, Oko Oil & Gas 2..... 8
H. Grolle, Wm. G. Grolle 3..... 7
Lake—Elizabeth Throne, Chas. F. Zeising & Co. 1 2

Wells completed 10
Production 189
Abandoned 0

HANCOCK COUNTY
Liberty—B. B. Porter, B. B. Porter 3 .. 20
Geo. Vonstein, Ohio Oil 9, 10..... abd
Eagle—J. H. Haley, B. Porter & Co. 23 40
Frank Freed, R. T. Rittenhouse 4... 20
M. H. Deeds, Harpst Bros. 23 35
Alice Stauffer, Star & Clark 11 5
Biglick—L. Wonders, Ridge Oil & Gas Synd. 1 18
Orange—L. J. Gressly, W. E. Stephenson 2, 3, 4, 5, 6, 7, 8, 9, 10 ..... abd

Wells completed 6
Production 138
Abandoned 11

ALLEN COUNTY
Bath—S. H. Vore, C. A. Peavey & Co. 6 5
Spencer—E. Wilkins, W. B. Jack 2 . 2
Jasper Purdy, W. B. Everbeck & Co. 6 8
Wm. Severs, M. J. Lynch, 1, 2, 3, 4, 5, 10 ..... abd
A. Etzkorn, M. J. Lynch 2, 3, 4..... abd
Richland—J. M. Nelswander, Chas. Shongood 6, 7, 8, 9, 10, 11, 12, 13 abd
P. Neuenschwander, Chas. Shongood 9, 10, 11, 12, 13 ..... abd
John Rohrback, Chas. Shongood, 4, 5, 6 ..... a d
Marion—Henry Good, Ohio Oil 5 ..... abd
J. A. Good, Ohio Oil 3 ..... abd
John Lucius, Mack P. Colt & Co. 3.. 35
American—H. D. Miller, Ohio Oil 1... abd
Jackson—W. J. Hall, Ohio Oil 12, 13, 14, 15, 16 ..... abd

Wells completed 5
Production 50
Abandoned 33

AUGLAIZE COUNTY
Moulton—G. & E. Doering, H. F. Kelley & Co. 1 ..... dry
A. Sillen, I. C. Robinson 2 3
Union—Ira Price, Campbell & Co. 1 ... dry
J. Harrod, Teeter & Otis 1 ..... dry
Jackson—Jos. Wohrmyer, Rock Oil 1... 10

Wells completed 5
Production 13
Dry 3

SANDUSKY COUNTY
Washington—Amos E. Waggoner, W. C. Richards & Co. 3 5
Amos E. Waggoner, W. C. Richards & Co. 4 8
John H. Meyers, Ohio Oil 9 25
Sophia Myerholtz, Home Banking 15 8
A. J. Meyers, Berlin & Russell Estate 2 ..... abd
Jackson—S. M. Klotz, Home Banking 4 5

Wells completed 5
Production 51
Abandoned 1

MERCER COUNTY
Center—E. Snavely, Ohio Oil 7 10
Moses Townsend, M. P. Colt & Co. 3 5
Jacob Dedrick, E. A. Kuhns & Co. 1, 2 ..... abd
Arthur Dick, E. A. Kuhns & Co. 2 abd
Butler—Jos. G. Wenning, J. E. Bailey 4 abd
Union—C. Griffin, M. P. Colt & Co. 1, 2, 4, 6 ..... abd
Mischael Deniston, M. P. Colt & Co. 1, 2, 3, 4 ..... abd
Recovery—Rose Fecher, Sam K. Tate, Jr. 4 10
H. F. Stackler, A. W. Neely & Co. 7 2
Washington—Mary Knoth, Dilbone & Co. 1 ..... gas

Wells completed 6
Production 29
Gas 1
Abandoned 11

SENECA COUNTY
Liberty—D. Hunker, Murphy & Son 1 30

LUCAS COUNTY
Oregon—Gertrude J. Niles, Ohio Oil 43 18

OTTAWA COUNTY
Harris—Chas. F. Magsig, Magsig & Son 12 15
Chas. F. Magsig, Gust Magsig & Sons 13 15

Wells completed 2
Production 30

SHELBY COUNTY
Cynthian—Theresa Goffena, Ohio Oil 2 25
Theresa Goffena, E. E. Laughner 4 3
Jennie Monnin, Lee A. Watson 3 5
Jas. Siegel, Wittmer Property Trustee 4 5
Jos. Siegel, Wittmer Property Trustee 5 5
F. Borchers, Ellerman Oil 1 ..... gas
McLean—Henry Ernst, L. T. McGrath 3 15

Wells completed 7
Production 58
Gas 1

HARDIN COUNTY
McDonel—Ira C. Shick, Boston-Southwestern Oil & Gas 1 50
Elizabeth Arthur, Roundhead Oil & Gas 5 75

Wells completed 2
Production 125

DARKE COUNTY
Mississinewa—W. C. Disher, Cole Oil & Gas 13 90
H. W. Long, J. G. Hoffman 8 ..... dry

Wells completed 2
Production 90
Dry 1

WYANDOT COUNTY
Ridge—C. A. Cooper, South Bend Producers 1 40

MICHIGAN
Saginaw—Carl Boldebuck, Bliss Petroleum 1 ..... dry
Fred Engle, Bliss Petroleum 1 15
Diendorf Koods, Saginaw Prospecting 2 10
Graham-Mertz, Valley Oil & Gas 1... 35
John Spatz, Superior Oil 1 35

Wells completed 5
Production 95
Dry 1

WOOD COUNTY
Wells Drilling
Portage—C. L. Sims, Wayne Oil 7.
Webster—Mike Roller, John Geldin & Co. 2
Perrysburg—Louisa Deverna, Oko. Oil & Gas Co. 5.
Chas. Thaiss, Oko O'l & Gas 3.
J. J. Heilman, Oko Oil & Gas 3.
Lake—Fred Berndt, Lants, Schulte & Co. 5.
Rigs, 0; wells drilling, 6; total, 6.

HANCOCK COUNTY
Wells Drilling
Liberty—M. E. Discus, Kirk & Discus 1.
Sarah Fountain, J. T. Montgomery 24.
Allen—Hy Franks, P. J. Pools Estate 12.
Portage—Minerva Overholt, Ohio Oil 6.
Marion—Elinor Spahr, Denhoff Bros. 1.
Eagle—M. H. Deeds, Harpst Bros. 24.
Frank Freed, R. T. Rittenhouse 5.
Union—M. H. Deeds, Harpst Bros. 9.
Biglick—Elnor Cross, Ridge Oil & Gas Synd. 2.
Rigs, 0; wells drilling, 9; total 9.

ALLEN COUNTY
Wells Drilling
Bath—John Lenny, Chas. Gesslchen & Co. 1.
P. D. Driver, O. T. Botkins & Co. 4.
S. H. Vore, C. A. Peavey & Co. 7.
Spencer—Ed Reynolds, South Fork Oil 4
Marion—John Lucius, M. P. Colt & Co. 4.
Rigs, 0; wells drilling, 5; total, 5.

AUGLAIZE COUNTY
Wells Drilling
Moulton—J. H. Gochenour, Ohio Oil 17.
Chas. Fritz, Wheeling & Zimmerman 1.
Rigs, 0; wells drilling, 2; total, 2.

SANDUSKY COUNTY
Wells Drilling
Washington—A. E. Waggoner, W. C. Richards & Co. 5.
John H. Meyers, Ohio Oil 10.
Jackson—S. M. Klotz, Home Banking 5.
Martha A. Talbot, Hauber & Talbert 7
Rigs, 0; wells drilling, 4; total, 4.

MERCER COUNTY
Wells Drilling
Center—Geo. Bollinger, Drake & Co. 1.
Hopewell—Ben Hellworth, June Oil 1.
Union—John U. Kennedy, Stelzer & Boyd 1.
Recovery—A. Fecher heirs, A. W. Neely & Co. 5.
Rose Fecher, Sam K. Tate, Jr. 5.
Liberty—J. Bollenbacher, Beatty & Hays 4
Jefferson—Hacker heirs, D. A. Miller & Co. 5.
Rigs, 0; wells drilling, 7; total, 7.

SENECA COUNTY
Wells Drilling
Clinton—A. E. Gever, Arthur E. Geyer 1.

LUCAS COUNTY
Wells Drilling
Monclova—Wm. Black, L. W. Cermlyn, Receiver 2.
Oregon—Gertrude J. Niles, Ohio Oil 44.
Rigs, 0; wells drilling, 2; total, 2.

OTTAWA COUNTY
Wells Drilling
Harris—Chas. F. Magsig, Gust F. Magsig & Sons 14.
Benton—Wm Nissen, Gladieux & Herman 2.
Salem—A. H. Mylander, Oak Harbor Natural Gas 1.
Catawaba-Hesselbart & Smith, Catawaba Oil & Gas 1.
Rigs, 0; wells drilling, 1; total, 1.

SHELBY COUNTY
Wells Drilling
Cynthian—Jennie Monnin, Lee A. Watson 1
N. Simon, Ellerman Oil 1.
Theresa Goffena, Ohio Oil 3.
Jos. Siegel, Wittmer Property Trustee 6
McLean—Henry Ernst, L. T. McGrath 4.
A. P. Rotterman, Ft. Laramie Oil & Gas 1
Rigs, 0; wells drilling, 6; total, 6.

HARDIN COUNTY
Wells Drilling
McDonel—Elizabeth Arthur, Roundhead Oil & Gas 6.
A. R. Zimmerman, Hardon Oil & Gas 6
Ira Schick, Boston-Southwestern Oil & Gas 2.
Floyd Stalder, Cockley Oil 2.
Rigs, 0; wells drilling, 1; total, 1.

DARKE COUNTY
Wells Drilling
Mississinewa—W. C. Disher, Cole Oil & Gas 14.

PAULDING COUNTY
Rigs
Harrison—C. Springer, John T. Schunck & Co. 5.
A. M. Bailey, U. S. A. Oil 6.
Wells Drilling
Jackson—Wm. Russell, Detroit-Cleveland Oil & Gas 1.
Rigs, 2; wells drilling, 1; total, 3.

CLARK COUNTY
Wells Drilling
Madison—Mattinson, T. D. Friend 1.

WYANDOT COUNTY
Wells Drilling
Ridge—S. B. Chesbrough, South Bend Producers 1.
G. Tong, Ohio Oil 1.
Rigs, 0; wells drilling, 2; total, 2.

MICHIGAN
SAGINAW COUNTY
Rigs
Saginaw—Ferdinand Steltzrieder, Sun Co. 1.
Chas. H. Kretchmer, Saval Development 1
Fred Engle, Bliss Petroleum 2.
Chas. R. Phillips, Barker Oil & Gas 1.
Carrollton—John Winters, W. D. Berghorn & Co. 1.
Taymouth—George Judd, S. M. Bacon & Co. 1.
Spaulding—Anthony Benkert, Henry A. Martin 1.

Wells Drilling
Saginaw—E. E. Householder, Saginaw City Building Co. 1.
Mrs. Jane Marshall, V. M. Vorhies & Co. 1.
Chas. Ulrich, Vorhies & McNally 1.
Martin Hanson, Saginaw Prospecting 1.
John Bremer, Saginaw Prospecting 1.
Water Works Park, Saginaw Prospecting 1.
August Kruske, Saginaw Prospecting 1.
John Schontelt, Sun Co. 1, 2.
Ernest Fisher, Ohio Fuel Corp. 1.
Mershon-Eddy-Parker, Ohio Oil 1.
Thomas Walker, Chas. Brandt 1.
Fred Pagel, J. H. Shaltry & Co. 1.
Casper Ulrich, Bliss Petroleum Co. 2.
Carrollton—Chas. Brechtelbauer, Myon E. Lee 1.
Buena Vista—Schwannecke, Gardner Pet 1.
George Wickham, Wanigas Oil Corp. 1.
Thomas—Henry Owen, Charles Murrin 1.
Bridgeport—Brown City Prospecting 1.
Rigs, 7; wells drilling, 19; total, 26.

BAY COUNTY
Wells Drilling
Bay Road—Leonard Gehringer, Jack Hendricks & Co. 1.

JACKSON COUNTY
Wells Drilling
Napoleon—Silvers, Jackson County Oil & Gas 1.

MONROE COUNTY
Wells Drilling
Dundee—Frank Roe, Jackson County Oil & Gas 1.

CENTRAL OHIO

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Tl.
Knox	4	0	2	2	0	7	7
Ashland	9	9	0	9	9	15	24
Medina	13	31	4	4	2	9	11
Lorain	2	0	2	0	0	5	5
Wayne	8	12	2	4	9	11	20
Holmes	8	313	1	2	6	19	25
Athens	7	0	2	5	3	12	15
Coshocton	4	172	1	2	3	3	6
Guernsey	5	0	1	4	14	9	23
Cuyahoga	5	0	1	4	0	11	11
Richland	1	0	1	0	0	0	0
Vinton	4	28	0	0	0	2	2
Jackson	0	0	0	0	1	0	1
Total July	70	556	17	37	47	102	150
Total June	41	172	11	27	45	97	141
Difference	29	384	6	10	2	6	8

WELLS COMPLETED
KNOX COUNTY
Jefferson—A. Arwiller, East Ohio Gas 2 gas
Bery Nyhart, I. O'Hail 2 ..... dry
Catherine Logsdon, Upham Gas 1 ... gas
Tisserand, Rocky River Oil 2 ..... dry

Wells completed 4
Dry 2
Gas 2

ASHLAND COUNTY
Orange—K. H. Flute, Logan Gas 1 . gas
J. A. Albright, Logan Gas 1 ..... gas
P. C. Fritzinger, Creston Oil 2 ... gas
Hanover—A. C. Hazlett, Logan Gas 1 .. gas
M. D. Leatherow, Ohio Fuel Gas 1 ... gas
J. H. Miller, East Ohio Gas 1..... gas
Green—J. R. Walton, Logan Gas 1 ..... gas
P. C. Cowan, Logan Gas 5 ..... gas
Gotlieb Koch, Ohio Fuel Gas 1 ..... gas

Wells completed 9
Gas 9

MEDINA COUNTY
Litchfield—Cora B. Pfeifer, Hulse & Kundtz, 1 4
Lafayette—R. O. Wheeler, Ohio Fuel Gas 1 ..... gas
Westfield—T. D. England, Logan Gas 1 dry
Montville—E. L. McFadden, Ohio Fuel Gas 1 ..... dry
Liverpool—Al. Trefany, Ohio Fuel Gas 1 gas
Nick A. Granson, Logan Gas 1 ..... gas
Granger—A. Rockwood, Empire G. & F. Co. 1 ..... gas
Chatham—Isaac Kent, Star Oil 3 10
R. Ross, H. A. Dempsey 38 10
R. Ross, H. A. Dempsey 39 5
D. Ross, H. A. Dempsey 40 ..... dry
Carl G. Packard, E. R. Edson Son 22 2
Ira Cleveland, Ohio Fuel Supply 1... dry

Wells completed 13
Oil wells 5
Production 31
Dry 4
Gas 4

LORAIN COUNTY
Columbia—Jacob Landin, Logan Gas 1 dry
S. A. Ives, Empire Gas & Fuel 1.... dry

Wells completed 2
Dry 2

WAYNE COUNTY
Green—C. S. & C. A. Eby, W. E. Hawk & Co. 1 ..... gas
A. J. Shisler, Logan Gas 1 ..... dry
Milton—C. W. Frick, East Ohio Gas 1 gas
Congress—O. E. Frank, Logan Gas 2 . gas
Canaan—T. A. Morrow, Wm. Denney & Co. 1 ..... gas
Daniel Wiles, Binter Bros. 2 2
Daniel Wiley, Binter Bros. 3 10
Chippewa—J. Muick, East Ohio Gas 1 dry

Wells completed 8
Oil wells 2
Production 12
Dry 3
Gas 4

HOLMES COUNTY
Monroe—Lizzie Rumbacher, Ohio Fuel Gas 1 5
Hardy—W. P. Close, Pure Oil 2 130
D. Northrow, Empire Gas & Fuel 2.. 175
Lewis Donald, Empire Gas & Fuel 1 gas
Killbuck—S. Carpenter, East Ohio Gas 1 dry
J. A. Middaugh, East Ohio Gas 1 ... gas
George Mertz, East Ohio Gas 4..... 3
Byron Middaugh, Leonard Oil & Gas 1 ..... gas

Wells completed 8
Oil wells 4
Production 313
Dry 1
Gas 3

ATHENS COUNTY
Carthage—J. W. Barnhill, Logan Gas 2 gas
Eaton Chase, Logan Gas 1 ..... dry
J. N. Niggemeyer, Logan Gas 1 ..... dry
Caroline Noyce, Logan Gas 1 ..... gas
J. Zumbaugh, Hawkins & Co. 1.... gas
Troy—Net. Richardson, Ohio F. S. 2.. gas
Canaan—Ben Maxwell, Daily & Co. 1 gas

Wells completed 7
Dry 2
Gas 5

COSHOCTON COUNTY
Newcastle—Wm. Johnson, Logan Gas 1 gas
Cassingham, Cassingham & Bell Bros. 13 ..... gas
Perry—R. T. Rine, Logan Gas 1 172
M. G. Wright, Klise-Eckstein-McCann Oil 1 ..... dry

Wells completed 4
Oil wells 1
Production 172
Dry 1
Gas 2

GUERNSEY COUNTY
Adams—W. L. Ford, Ohio Fuel Gas 2. gas
S. R. Williams, Logan Gas 4 ..... gas
James Mercer, Ohio Oil 3 ..... gas
Keith Lot, Keith & Co. 1 ..... gas
Wheeling—Cina Forney, Ohio F. G. 1 dry

Wells completed 5
Dry 1
Gas 4

CUYAHOGA COUNTY
Dover—Nellie E. Hodge, Hulse & Kunditz 1 ..... gas
E. & T. Rose, Logan Gas 1 ..... gas
W. H. Reeves, Mulford Portmann 1 gas
J. Gesener, Daugherty Bros. 1 ..... gas
Middleburg—P. & A. Yonks, East Ohio Gas 1 ..... dry

Wells completed 5
Dry 1
Gas 4

RICHLAND COUNTY
Madison—L. A. Keith, G. H. Schrack & Co. 1 ..... dry

VINTON COUNTY
Knox—Louis Cline, Shaeffer Oil 1 12
T. G. Cline, Gordon Oil 1 5
Frank Martin, B. Henry & Co. 1.. 5
W. W. Beckley, Co-Operative Oil 2 6

Wells completed 4
Oil Wells 4
Production 28

KNOX COUNTY
Wells Drilling
Jefferson—Peter Kaufman, East Ohio Gas 1.
Carl Stout, East Ohio Gas 1.
Brown—Fred Kick, East Ohio Gas 1.
John H. Workman, Ohio Fuel Gas 8.
J. & S. Hair, Upham Gas 1.
Morgan—Jacob Hays, Widerman & Co. 1.
Clay—L. M. Divan, Roy Decker 1.
Rigs, 0; wells drilling, 7; total, 7.

ASHLAND COUNTY
Rigs
Orange—P. M. Fluke, Logan Gas 1.
Hanover—L. S. Sidle, Logan Gas 1.
Thos. Miller, Ohio Fuel Gas 1.
M. C. Leatherow, Ohio Fuel Gas 2.
Green—Wiley Johnson, Logan Gas 1.
Sullivan—John J. Smith, Logan Gas 1.
D. E. Spencer, Ohio Fuel Gas 1.
Mifflin—Martha King, Geiger & Barnhart 1
Lake—John Moore, Logan Gas 1.
Wells Drilling
Orange—Floyd Shaum, Logan Gas 2.
Mrs. Jennie Murray, Logan Gas 1.
Wm. Frizzle, Logan Gas 1.
J. H. Buchman, Ohio Fuel Gas 1.
Hanover—Frank Firestone, Logan Gas 2.
Mary Kempt, Ohio Fuel Gas 1.
Green—Sanitary Products, Wiser Oil 1.
J. C. Walters, Logan Gas 1.
W. C. Workman, Logan Gas 1.
J. F. Jones, Ohio Fuel Gas 2.
Sullivan—Hattie Tedrow, Logan Gas 1.
L. & G. Burkhart, Logan Gas 1.
S. C. Baldorf, Ohio Fuel Gas 1.
J. A. Spencer, Klise-Eckstein-McCann 3.
Clear Creek—Wm. Spencer, Hulse & Kunditz 1.
Rigs, 9; wells drilling, 15; total, 24.

MEDINA COUNTY
Rigs
Litchfield—Geo. Kennedy, Globe Oil & Gas 1
Liverpool—Phoebe Stroskopt, East Ohio Gas 3.
Wells Drilling
Litchfield—Leland R. Seeley, Logan Gas 9.
Lafayette—H. S. Koppes, Ohio Fuel Gas 1.
W. A. McCabe, John Athur 1
York—Frank Pallowany, Logan Gas 1.
Frederick Baker, Hulse & Kunditz 2.
Liverpool—Nick A. Granson, Logan Gas 2.
Geo. Stroskpt, Ohio Fuel Gas 2.
Brunswick—Delpha J. Hitchcock, Ohio Fuel Gas 1.
Spencer—Ellsworth Brevley, Logan Gas 1.
Rigs, 2; wells drilling, 9; total, 11.

LORAIN COUNTY
Wells Drilling
Columbia—Wm. Rundel, Logan Gas 2.
M. & H. Francis, Empire Gas & Fuel 1
Robt. Squires, Ohio Fuel Gas 1.
Rose Alams, Chemical Oil 1.
Grafton—John A. Rising, Logan Gas 1.
Rigs, 0; wells drilling, 5; total, 5.

WAYNE COUNTY
Rigs
Wooster—Lee Martin, Ohio Oil 3.
Greene—C. S. & C. A. Eby, W. E. Hawk & Co. 2.
East Union—M. Lautenschlager, Logan Gas 1.
Milton—A. & E. Bedager, East Ohio Gas 1.
Plain—Ada Todd, East Ohio Gas 5.
Congress—E. K. Weltman, Logan Gas 5.
Eliza E. Ginter, Arco Oil 1.
Barton Ginter, Warren Palmer & Co. 3.
Baughman—Lydia C. Garber, Logan Gas 1
Wells Drilling
Wooster—Jas. M. Carroll, Ohio Oil 4.
Milton—B. Mibach, East Ohio Gas 1
Paint—J. M. Westcott, Ohio Fuel Gas 1
Congress—O. E. Frank, Logan Gas 3.
Stanley Smith, Ohio Fuel Gas 1.
Lowery Johnson, Ohio Fuel Gas 1.
Ora Kenney, Empire Gas & Fuel 2
Clayton Good, Glen Harmon & Co. 3.
S. A. Swanson, Warren Palmer & Co. 4
Chippewa—A. Zollinger, Westhoff & Winger 1.
Baughman—Lorena King, Logan Gas 1.
Rigs, 9; wells drilling, 11; total, 20.

HOLMES COUNTY
Rigs
Monroe—O. M. Smithisler, Ohio Oil 3.
Hardy—Delpha Nethrow, Empire Gas & Fuel 3.
C. & V. Graff, East Ohio Gas 1.
Kilbuck—Wm. H. Mohr, East Ohio Gas 1.
C. P. Allison, Ohio Fuel Gas 1.
Richland—Geo. L. Strouse, East Ohio Gas 1
Wells Drilling
Monroe—John Shanklin, Ohio Fuel Gas 1.
Wm. Miller, Arkansas Fuel Oil 3.
Oscar Steele, Empire Gas & Fuel 1
Hardy—Warren L. Close, Pure Oil 3. 4
Mrs. Wilson Pyres, Pure Oil 1.
Bernice Allison, East Ohio Gas 1.
John R. Hastings, East Ohio Gas 2
D. R. Anderson, East Ohio Gas 3.
Mary A. Findlay, Empire Gas & Fuel 1
Jesse P. Close, Empire Gas & Fuel 3.
Caroline Cullen, Klise-Eckstein-McCann 1
Prairie—Lee Durbin, Pure Oil 3.
Paint—Levi Weaver, Logan Gas 1.
Dan C. Wengard, Ohio Fuel Gas 1.
S. J. Miller, Ohio Fuel Gas 1.
Salt Creek—Adam Karch, Empire Gas & Fuel 1.
Kilbuck—Christian Miller, East Ohio Gas 1.
Laura E. Turner, Klise-Eckstein-McCann 1.
Rigs, 6; wells drilling, 19; total, 25.

ATHENS COUNTY
Rigs
Carthage—W. O. & Mary Stout, Logan Gas 3.
Myrtle, Logan Gas 1.
I. & E. Pierce, Logan Gas 1.
Wells Drilling
Carthage—S. A. Wilson, Logan Gas 2.
Eaton Chase, Lagon Gas 2.
J. E. Bailey, Jay Oil & Gas 9.
G. E. Bradford, Goddard & Cunningham 1.
Oliver Lewis, Hawkins & Co. 1.
J. L. Yarner, Fairfield Gas 1.
Edward Burke, C. W. Nuzum 2.
Elijah Dunlavey, Ohio Fuel Gas 1.
M. Rowan, E. A. Sweeney & Co. 2.
Waterloo—L. Hewitt, Guenther & Co. 2.
P. C. Shalus, Logan Gas 1.
Rome—E. S. Byron, H. W. Leeper & Co. 3.
Rigs, 3; wells drilling, 12; total, 15.

COSHOCTON COUNTY
Rigs
Triverton—A. S. & Sarah Cooper, Logan Gas 1.
Perry—E. R. & O. M. VanWinkle, Logan Gas 3.
Linton—Cliff McFarland, Ohio Fuel Supply 1.
Wells Drilling
Newcastle—Cassingham, Cassingham & Bell Bros. 14.
Perry—Mossholder, Murphy & Co. 3.
Monroe—Guy Fyers, Ohio Oil 1.
Rigs 3; wells drilling, 3; total, 6.

GUERNSEY COUNTY
Rigs
Adams—George Bell, Ohio Fuel Gas 1.
Anna M. Jerels, Ohio Fuel Gas 1.
C. O. Watson, Ohio Fuel Gas 1.
Riley Moon, Ohio Fuel Gas 1.
Wilmer Oliver, Ohio Fuel Gas 1.
O. C. Ford, Ohio Fuel Gas 1.
H. T. LaPage, Ohio Fuel Gas 1.
James D. Taylor, Ohio Fuel Gas 1
Henry M. Stock, Ohio Fuel Gas 1
M. K. Wells, Logan Gas 1.
W. B. Oliver, Logan Gas 2.
Cambridge—Harry M. Steele, Ohio Fuel Gas 1.
Sarah Ford, Cambridge Gas 1
Wheeling—Howard Beeks, Logan Gas 1
Wells Drilling
Adams—W. C. Morrison, Ohio Fuel Gas 1
Lola Shriver, Ohio Fuel Gas 1.
T. A. Ranking, Ohio Fuel Gas 1.
Wayne Mining Co., Detroit Edison Co. 1.
T. R. Speer, Ohio Oil 2.
Maud Oliver, Ohio Oil 1.
Martin L. Medley, Big Lima Oil 1
Westland—T. A. White, Leonard Oil & Gas 2.
H. W. Fulton, Stoltz & Co. 1.
Rigs, 14; wells drilling, 9; total, 23.

CUYAHOGA COUNTY
Wells Drilling
Dover—J. A. Hoover, Arthur & Simpson 1.
C. & M. A. King, Arthur & Simpson 1.
J. Jenkins, Arthur & Simpson 1.
P. Hough, Arthur & Simpson 1.
J. & E. Jenkins, Dempsey Bros. 1
C. Nicholas, Wiser Oil 1.
S. Sodlick, Wiser Oil 1.
Nellie E. Hodge, Hulse & Kunditz 2.
James Jenkins, Hulse & Kunditz 1
W. E. Elliott, Logan Gas 1.
Rigs, 0; wells drilling, 11; total, 11.

VINTON COUNTY
Wells Drilling
Knox—G. C. Davis, John DeLong & Co. 1
Frank Martin, B. Henry & Co. 2
Rigs, 0; wells drilling, 2; total, 2

JACKSON COUNTY
Rigs
Franklin—W. L. Kinnison, Logan Gas 2.

ILLINOIS

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Clark	6	120	0	0	0	10	10
Crawford	10	36	2	2	0	9	9
Lawrence	2	40	0	0	2	5	7
Wabash	13	928	2	0	1	13	14
Marion	2	0	2	0	0	4	4
Coles	0	0	0	0	0	2	2
Douglass	0	0	0	0	0	1	1
Jasper	0	0	0	0	0	1	1
Fayette	0	0	0	0	1	0	1
McDonough	0	0	0	0	0	4	4
Edwards	0	0	0	0	0	1	1
Randolph	0	0	0	0	0	1	1
Madison	0	0	0	0	0	1	1
Total July.	33	1,124	6	2	4	52	56
Total June.	25	841	8	0	4	44	48
Difference	8	283	2	2	0	8	8

Wells Completed
CLARK COUNTY
Parker—N. B. Lee, Chas. E. King 6 2
Westfield—W. R. Shuey, Adkins & Co. 2 2
Casey—James Rush, W. C. McBride Inc. 24 24
Martinsville—M. J. McClelland, Mahutska Oil 4 70
Chas. McFarland, Gambill, Rogers & Co. 2 12
Johnson—C. H. Ring, Ohio Oil 6 10
Wells completed 6
Production 120
CRAWFORD COUNTY
Oblong—Preston Coudry, Brenneman & McDonnell 26 1
Honey Creek—J. D. Reaville, John Phipps 4 2
J. D. Reaville, John Phipps 5 ..... dry
Claudie O. Reaville, Selby-Cisler Prod. 48 8
Oliver Lawrence, L. C. McDowell & Co. 3, 4 ..... abd
S. S. Reinohl, Karnes & Schrecongest 1, 2, 3 ..... abd
Martin—L. M. Highsmith, Abbott & Co. 1 10
Prairie—Amelia E. Joseph, McNally & Starr 7 5
John T. Newlin, D. D. Nolan 14 ..... dry
C. E. Price, Ohio Oil 19 10
Robinson—Harry E. Otty, J. S. McNally & Co. 1 ..... gas
Licking—Silas Wilkins, Peoples Bank & Trust 4 ..... gas
Wells completed 10
Production 36
Dry 2
Abandoned 3
Gas 2
LAWRENCE COUNTY
Dennison—P. W. Clark, Ohio Oil 13 5
Smith-Neely Oil, Ohio & Associated Prod. 30 ..... abd
Petty—W. M. Pemberton, Pemberton Oil & Gas 25 35
H. C. Johnson, Ohio Oil 4 ..... abd
Albert Westfall, Ohio Oil 10 ..... abd
Sarah Jennings, Bradford Oil Corp. 1, 3, 5, 6, 11 ..... abd
Lawrence—Effie Eshleman, Ohio Oil 5 abd

Wells completed 2
Production 40
Abandoned 9
WABASH COUNTY
Wabash—J. C. Trimble, Joe S. Young Jr. & Co. 2 15
J. G. Trimble, Snowden & McSweeney 1 ..... dry
Jernema Cisil, W. C. McBride Inc. 2 30
W. M. Price, Risley & Co. 1 15
J. T. Smith, Adams Corner Oil Co. 6.. 58
Mack Madden, Adams Corner Oil Co. 8 150
Jesse Cisil, Eastern Gulf Oil 3 20
Kogan heirs, Mayhugh & Co. 5 175
Kogan heirs, Mayhugh & Co. 6 200
Collison heirs, Ellison & Co. 3 100
Mack Madden, Mahutska Oil 4 150
Friendsville—J. O. Wood, Wood Oil 2... 15
H. C. Yelton, W. M. Bell & Co. 2 ... dry

Wells completed 13
Production 928
Dry 2
MARION COUNTY
Centralia—Fannie McIntosh, James Oil 2 dry
A. W. Webster, Petro Oil & Gas 9... dry
Clark-Bailey, Gorman, Huddleston & Co. 1 ..... abd
Jos. Gaitti, Joseph Gaitti 1 ..... abd
Sandoval—F. M. Guyon, Ohio Oil 8 ..... abd

Wells completed 2
Dry 2
Abandoned 3
CLARK COUNTY
Wells Drilling
Parker—J. S. Phillips, Ohio Oil 28.
N. & K. Young, Ohio Oil 118.
Westfield—Hartford Drake, Ohio Oil 16.
Casey—W. L. Slater, Trenton Rock Oil & Gas 1.
Chas W. Lowe, Holmes & Co. 4.
A. W. Baker, Arkansas Fuel Oil 2.
J. Y. Smith, Ohio Oil 7.
Martinsville—A. W. Cavolt, Ohio Oil 5.
E. R. Ault, Trenton Rock Oil & Gas 9.
Johnson—C. O. Gross No. 2, Southern Oil 33.
Wells drilling, 10.
CRAWFORD COUNTY
Wells Drilling
Oblong—Geo. Zigles, Brenneman & McDonnell 6.
Honey Creek—J. R. Reaville, John Phipps 6.
Claudie O. Reaville, Selby-Cisler Prod. 49.
J. L. Cullom, Barber & Co. 1.
Martin—A. W. Mann, Frost Oil 4.
Montgomery—G. B. Ford, Walter Squires & Co. 9.
C. A. Dickinson, W. C. McBride Inc. 7.
J. P. Sager, Thos. Flynn 9.
Wells drilling, 8.
LAWRENCE COUNTY
Rigs
Dennison—Mrs. G. H. Highsmith, Frank Brown & Son 1.
Ella Smith, Andrews & Co. 1.
Wells Drilling
Dennison—Wm. Gillespie, Ohio Oil 6.
Victor B. Harling 38-A, Ohio Oil 6.
Ellen Lutz, Ohio Oil 7.
Bridgeport—J. R. Middah, Ohio Oil 23.
Russell—A. J. Vaught, Hartman & Co. 1.
Rigs, 2; wells drilling, 5. Total, 7.
WABASH COUNTY
Rigs
Friendsville—J. Goodart, Henneberger & Co. 1.
Lick Prairie—Chas. S. Groff, Clark, Miller & Co. 1.
Wells Drilling
Wabash—E. Alka heirs, Joe S. Young Jr. & Co. 3.
Nora Marcotte, W. C. McBride Inc. 5.
J. H. Cisil, W. C. McBride, Inc. 5.
W. O. Johnson, Adams Corner Oil 1.
Sallie Compton, Eastern Gulf Oil 1.
Mack Madden, Mahutska Oil 5.
Kogan heirs, Mayhugh & Co. 7.
Collison heirs, Ellison & Co. 4.
Friendsville—J. W. Price, Keller & Co. 2.
Christ Frick, Henneberger & Co. 1.
J. O. Wood, Wood Oil 3.
Bellmont—P. R. Fisher, Bell Bros. 1.
Lick Prairie—Wm. Crump, Clark, Miller & Co. 1.
Rigs, 1; wells drilling, 13. Total, 14.
MARION COUNTY
Wells Drilling
Sandoval—Homer M. Adams, Ohio Oil 1.
A. W. Webster, Petro Oil & Gas 8.
John Kinsey, Petro Oil & Gas 14.
H. Higgins, Higgins & Co. 1.
Wells drilling 4.
COLES COUNTY
Wells Drilling
Charleston—Earl Thrakill, Block Oil Corp. 1.
Ashmore—Luther Houghton, Shrider & Co. 1
Wells drilling, 2.
DOUGLASS COUNTY
Well Drilling
Sargent—W. E. Brown, Douglass Oil 1.
JASPER COUNTY
Well Drilling
Grandville—Ella Decker, Wimsett & Co. 1.
FAYETTE COUNTY
Rig
Fayette—John Baxter, H. McCurdy 1.
McDONOUGH COUNTY
Wells Drilling
Plymouth—Colmar-Stoneking, Unknown 1.
Neil Thoerson, W. A. Evans 1.
M. H. Williams, Fisher & Co. 1.
C. B. Allison, Ohio Oil & Bacon 1.
Wells drilling, 4.
EDWARDS COUNTY
Well Drilling
French Creek Precinct—J. M. Helm, Grayville Oil Synd. 1.
RANDOLPH COUNTY
Well Drilling
Sparta—McElroy, Bill Goddard & Co 1
MADISON COUNTY
Well Drilling
Northeast of Bellville—Unknown 1

INDIANA FIELD

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Blackford	0	0	0	0	0	1	1
Jay	1	5	0	0	0	1	1
Adams	5	12	1	1	0	8	8
Huntington	1	20	0	0	0	0	0
Randolph	0	0	0	0	1	0	1
Gibson	2	0	2	0	0	3	3
Pike	3	75	0	0	1	10	11
Sullivan	2	1	0	1	0	3	3
Allen	1	5	0	0	1	2	3
Knox	1	11	0	0	0	4	4
Daviess	13	688	0	0	0	8	8
Shelby	0	0	0	0	0	1	1
Lagrange	0	0	0	0	0	1	1
Vigo	0	0	0	0	0	1	1
Dubois	0	0	0	0	0	1	1
Warrick	0	0	0	0	0	1	1
Total July.	29	817	3	2	3	45	48
Total June.	16	247	8	1	3	37	49
Difference	13	570	5	1	0	8	8

INDIANA
Wells Completed
JAY COUNTY
Bear Creek—L. D. Bone, Central West Oil & Gas 2 5
ADAMS COUNTY
Jefferson—Wm. Smitley, Harmon & Watts 1 5
Blue Creek—Schulte, Schulte, Haney & Co. 3 ..... gas
Wabash—Armstrong heirs, Chicago Oil 2 dry
Monroe—Christ Stegel, S. S. Anderson & Co. 1 2

Wells completed 4
Production 7
Dry 1
Gas 1
HUNTINGTON COUNTY
Salamonie—Calvin Perdue, March Petroleum 28 20
GIBSON COUNTY
Barton—J. W. Farris, Gem Oil Corp. 1 dry
Washington—Willmer Canniff, Chas. D. Stroble Trus. 3 ..... dry

Wells Completed 2
Dry 2
PIKE COUNTY
Logan—Gurney Stewart, H. C. Darby & Co. 1 15
J. S. Wilson, Miller, Davis & Co. 2 50
Clay—Claud Loveless, Dement Oil 5 10

Wells completed 3
Production 75
SULLIVAN COUNTY
Gill—Sarah Vaughn, Fred Bays 1 .... gas
Turman—Cordia M. Willis, Hardin Oil 2 1

Wells completed 2
Production 1
Gas 1
ALLEN COUNTY
Maumee—W. Kammyer, Estes, Manion & Co. 1 8
KNOX COUNTY
Harrison—W. E. Harrison, Murphy Oil 4 11
DAVIESS COUNTY
Veale—McDougal heirs, Geiger Oil 1... 70
McDougal heirs, Geiger Oil 2 60
McDougal heirs, Geiger Oil 3 30
Frank Gaither, Geiger Oil 2 50
Frank Gaither, Geiger Oil 3 60
Frank Gaither, Geiger Oil 4 80
Frank Gaither, Geiger Oil 5 40
Cisil Colbert, Geiger Oil 1 5
Cicly Colbert, Geiger Oil 1 40
Cisil Colbert, Geiger Oil 2 40
J. M. Peek, Peek Oil 2 130
J. M. Peek, Peek Oil 3 50
J. M. Peek, Peek Oil 4 68
Ragsdale heirs, Peek Oil 1 25

Wells completed 13
Production 688
BLACKFORD COUNTY
Well Drilling
Harrison—A. F. Gerard, Montpelier Development 2.
JAY COUNTY
Well Drilling
Green—Ray Houck, Bolxome & Co. 1.
ADAMS COUNTY
Wells Drilling
Jefferson—Mary J. Niblick, J. H. Harmon & Co. 6.
Wm. Smitley, Harmon & Watts 2.
Wm. Bollebacher, H. E. McKelvey 1.
Blue Creek—C. Jones, William King 4.
Jos. Sipe, Geo. S. Lacknett 2.
Schulte, Schulte, Haney & C o. 6.
Wabash—J. S. Steiner, N. B. Daugherty & Co. 3.
Mrs. Dan Hawbacker, O. C. Fink & Co. 1.
Wells drilling, 8.
RANDOLPH COUNTY
Rig
Green—W. Cline, T. O. Thorp 2.
GIBSON COUNTY
Wells Drilling
Barton—M. M. Conrad, Bell Bros. 1.
Washington—Jos. Armstrong, Bell Bros. 1.
Center—A. J. Mans, The Ohio Oil 1.
Wells drilling, 3.
PIKE COUNTY
Rig
Logan—E. Beck, Alex Singer 2.
Wells Drilling
Logan—Walter Miley, Skidmore, Trustee 2, 3.
Sarah Shoaf heirs, Andrews & Burden 3.
Wm. Miley, J. Morsey & Co. 1, 2.
Erna Wilson, Wiser Oil 1.
Clay—Stewart Bros., Murphy Oil 5, 6.
Chas. McAtee, A. B. Bement 1.
Madison—A. H. Johnson, The Ohio Oil 2
Rigs, 1; wells drilling, 10. Total, 11
SULLIVAN COUNTY
Wells Drilling
Gill—G. Irwin, Fred Baya 1.
Fairbanks—J. V. Merrill, The Ohio Oil 22
Turman—W. W. Harris, The Ohio Oil 12
Wells drilling, 3.
ALLEN COUNTY
Rig
Maumee—D. Helmke, Waterloo Oil & Gas 3
Wells Drilling
Maumee—M. Roamake, Schuran Oil 1
J. F. Britt, Estes, Manion & Co. 1
Rigs, 1; wells drilling, 2. Total, 3.
KNOX COUNTY
Wells Drilling
Decker—Musselman, Eastern Gulf Oil 1

Nellie M. Orr, Eastern Gulf Oil 1.
Henry Sullivan, Unknown parties 1.
Harrison—W. E. Harrison, Murphy Oil 5.
Wells drilling, 4.

DAVIESS COUNTY
Wells Drilling

Veale—Frank Gaither, Geiger Oil 6.
J. W. Backas, Geiger Oil 1.
J. M. Peek, Peek Oil 4.
Wonders, Thorn Oil & Gas 1.
Andy Gros, Neal & Co. 1.
D. K. Morgan, Neal & Co. 1.
Allison heirs, Perise Covinal & Co. 1.
H. Ragsdale, Peek Oil 2.
Wells drilling, 8.

SHELBY COUNTY
Well Drilling

Van Buren—J. Harschbarger, L. N. Nicolson 1.

LAGRANGE COUNTY
Well Drilling

Howe-Howe Oil & Gas Co. 1.

VIGO COUNTY
Well Drilling

Sugar Creek—Nattemper, Welch, Flynn & Gambill 1.

DUBOIS COUNTY
Wells Drilling

Cass—Wm. Meissner, Whealer & Co. 1.

WARRICK COUNTY
Well Drilling

Pidgeon-Vock & Folson, Turner Oil & Gas 1.

KENTUCKY-TENNESSEE

Summary of Field Operations

	Comp.	Prod.	Dry	Gas	Rigs	Drg.	Ttl.
Warren	12	46	5	0	1	14	15
Allen	16	34	4	0	0	10	10
Barren	26	126	7	1	0	44	44
Owensboro District	22	223	3	0	0	31	31
Cumberland-Monroe	2	5	1	0	3	10	13
Simpson	2	10	0	0	0	2	2
Green	1	0	0	1	0	0	0
Casey	0	0	0	0	1	1	2
Clinton	0	0	0	0	0	1	1
Wayne	3	1	2	0	1	4	5
Lee-Owsley	2	8	0	0	0	7	7
Powell	1	5	0	0	0	0	0
Estill	8	62	2	0	0	9	9
Wolfe	2	9	0	0	1	0	1
Lawrence-Johnson	17	132	0	0	0	13	13
Johnson-Magoffin	9	138	0	0	3	18	21
Floyd	2	0	1	1	0	4	4
Knox	0	0	0	0	0	3	3
Morgan	1	0	0	1	0	1	3	4
Elliott	0	0	0	0	0	1	3	4
Menifee	0	0	0	0	0	2	2
Laurel	0	0	0	0	0	0	1	1
Jackson	0	0	0	0	0	0	1	1
Greenup	0	0	0	0	0	0	1	1
Carter	1	5	0	0	0	0	3	3
Kentucky	127	804	26	3	12	185	197
Tennessee	2	100	1	0	0	13	13
Mississippi	0	0	0	0	5	9	14
Alabama	0	0	0	0	0	4	4
Florida	0	0	0	0	0	1	1
Total July	129	904	27	3	17	212	229
Total June	149	2506	33	6	18	205	223
Difference	20	1602	6	3	1	7	6

WELLS COMPLETED

WARREN COUNTY

Bowling Green—C. H. Daugherty, F. F. Blanchard 1 . . . dry
N. L. Miller, Pet. Exploration 1 . . . dry
Ben Price, Bolling & Lowman 7 . . . 2
J. T. Vance, Dr. Cauble Atty. 5 . . . dry
Vic Chaney, Hogan & Co. 1 . . . dry
C. G. Davenport, Onsel Bros. & Co. 8 . . . 10
Georgia Ann Davenport, T. A. Sheridan 6 . . . dry
Josephine Ennis, Onsel Bros. 9 . . . 3
Hundley & Walters, W. Roy Hogan & Co. 1 . . . 11
Hundley & Walters, W. Roy Hogan 2 . . . 11
Ed. Covington, Vistor Bartoletti & Co. 1 . . . 5
Joe Kelley, J. T. Hobson 11 . . . 4

Wells completed . . . 12
Production . . . 46
Dry . . . 5

ALLEN COUNTY

Scottsville—Lee Moore No. 2, Lee Moore 6 . . . 4
Ike Hill, F. J. Tapp 11 . . . 3
Ike Hill, F. J. Tapp 12 . . . 3
Phoebe Oliver, Sam Bradshaw 14 . . . 2
Earl Oliver, M. H. S. Oil 3 . . . 2
Earl Oliver, M. H. S. Oil 2 . . . dry
W. M. Dodson, A. Davis 3 . . . 10
J. F. Stovall, John H. Healey Atty. 12 . . . 3
M. J. Lewis, Mealy & Mealy 19 . . . dry
A. A. Davenport, Fred W. Owen 16 . . . 1
I. H. Rickman, Citizens Oil 18 . . . dry
J. W. Frost, W. G. Moorman rec. 12 . . . 1
J. W. Frost, W. G. Moorman rec. 13 . . . 3
Effie Sanders, Helka Dev. 9 . . . 1
R. Dinwoodie, Andrus & Works 1 . . . dry
Elizabeth Stovall, C. L. Sherwood 12 . . . 1

Wells completed . . . 16
Production . . . 34
Dry . . . 4

BARREN COUNTY

Emery-Moore Pool—Mayfield, Houchins Leasehold 15 . . . 16
Mayfield, Houchins Leasehold 14 . . . 5
Wilson, Phil Kopel 2 . . . 5
Howard, Fred C. Moore 12 . . . 3
Richardson, Lew J. Emery, Jr., Sons 1 . . . dry
W. E. Steffey, Seems & Co. 1 . . . 2
W. E. Steffey, Seems & Co. 2 . . . 15
Hall-Baker Pool—H. W. Duff, Consolidated Gas 30 . . . dry
Gorby Pool—Sanders, Jacob Best trus 5 . . . 5
McGlochlin, J. W. Porter 18 . . . 3
McGlochlin, J. W. Porter 19 . . . 2
W. D. Beals, Hiland O. & G. 1 . . . dry
Hatfield, J. J. Sayre 3 . . . 5
Furlong, W. A. Alexander 1 . . . 1
Furlong, W. A. Alexander 2 . . . 1
Furlong, W. A. Alexander 3 . . . 1
Knob Road Field—C. D. Boyd, Ziegler Bros. 3 . . . dry
C. D. Boyd, Ziegler Bros. 6 . . . 15
Harrison, Wiggins & Gillespie 2 . . . gas
Harrison, Wiggins & Gillespie 3 . . . dry
Richardson, Star O. & G. 7 . . . 15
White, R. B. Tyler 8 . . . 3
Oil City Pool—Martin, Lew J. Emery, Jr., Sons 3 . . . dry
Jimtown Road—Walker, Esslinger Oil 1 . . . dry
Lecta Pool—C. B. Jones, Esslinger Oil 8 . . . 5
Dean, Baird & McCaigney 1 . . . 30

Wells completed . . . 26
Production . . . 126
Dry . . . 7
Gas . . . 1

OWENSBORO DISRICE
(Hancock-Ohio-Daviess Counties)

Owensboro District—O. T. Burdette, Vicion Oil 8 . . . 5
O. T. Burdett, Vicion Oil 9 . . . 5
J. A. Greer, Leeper Oil 1 . . . 2
J. S. Collier, Leeper Oil 1 . . . 10
C. A. Leeper, Dearborn Oil 2 . . . 5
Laura Mercer 84-a, Penn-Indiana Syndicate 6 . . . 35
Laura Mercer 84-a, Penn-Indiana Syndicate 7 . . . 25
W. L. Griffith, Penn-Indiana Synd. 2 . . . dry
W. L. Griffith, Penn-Indiana Synd. 3 . . . 8
Joe Bob Ellis, White Plains O. & G. 2 . . . 10
Orella Ralph, White Plains O. & G. 3 . . . 5
J. J. Midkiff, White Plains O. & G. 4 . . . 10
Joe Bob Ellis, White Plains O. & G. 3 . . . 10
Ellis & Sheflin, Ohio Oil 1 . . . 15
Ambrose, Ohio Oil 1 . . . 15
Joe Bob Ellis, J. W. Lowman Atty 3 . . . 15
Guenther-Gant 270-a, Chicago Petroleum Synd. 7 . . . 15
Guenther-Gant 270-a, Chicago Petroleum Synd. 8 . . . 20
Guenther-Gant 114-a, Chicago Petroleum Synd. 1 . . . 5
M. Coleman, Tremor & Thompson 1 . . . dry
Taylor fee 16-a, C. A. Leeper 4 . . . 8

Wells completed . . . 22
Production . . . 223
Dry . . . 3

CUMBERLAND-MONROE COUNTIES

Crocus Creek—Morgan No. 1, Crawford & Co. 1 . . . dry
Sulphur Creek—J. A. Melton, Wilcox Brothers 4 . . . 5

Wells completed . . . 2
Production . . . 5
Dry . . . 1

SIMPSON COUNTY

Franklin—Slate, Slate Bros 2 . . . 5
Hogan, Small & Tully 11 . . . 5

Wells completed . . . 2
Production . . . 10

GREEN COUNTY

Greensburg—Curry, T. Curry & Co. 1 . . . gas

EASTERN DIVISION

WAYNE COUNTY

District 2—T. T. Davis, Vulcan Oil 18 . . . 1
District 3—Burnett heirs, D. C. Adkins 5 . . . dry
District 13—Nancy L. Jones heirs, W. L. Souther 2 . . . dry

Wells completed . . . 3
Production . . . 1
Dry . . . 2

LEE-OWSLEY COUNTIES

District 18—Jack Evans, Combs Bros. Dev. 3 . . . 5
District 16—Hall-Burke, Superior Oil Corp 91 . . . 3

Wells completed . . . 2
Production . . . 8

POWELL COUNTY

District 15—John A. Rogers, W. O. Dunham 5 . . . 5

ESTILL COUNTY

District 7—D. N. Witt, R. Denton & Co. 11 . . . dry
District 8—S. M. Maple, Reno Oil 7 . . . 10
Simp Horn, Superior Oil Corp. 3 . . . dry
Simp Horn, Superior Oil Corp. 9 . . . 10
Simp Horn, Superior Oil Corp. 10 . . . 10
Simp Horn, Superior Oil Corp. 13 . . . 10
Simp Horn, Superior Oil Corp. 14 . . . 10
William Neal, Wood Oil 9 . . . 12

Wells completed . . . 8
Production . . . 62
Dry . . . 2

WOLFE COUNTY

District 6—Miller-Prewitt-Goff, Petroleum Exploration 13 . . . 5
Miller-Prewitt-Goff, Petroleum Exploration 14 . . . 4

Wells completed . . . 2
Production . . . 9

LAWRENCE-JOHNSON COUNTIES

District 22—Caney Sparks, Swiss Oil Corp. 11 . . . 5
Caney Sparks, Swiss Oil Corp 12 . . . 5
R. N. Sparks No. 1, Swiss Oil Corp. 9 . . . 5
Proctor Sparks, Swiss Oil Corp. 31 . . . 8
L. M. Hay, Garrison & Townsend 7 . . . 6
L. T. Sparks, Swiss Oil Corp. 10 . . . 3
District 22-A—C. K. Dobyne No. 1, Swiss Oil Corp. 20 . . . 5
C. K. Dobyne No. 1, Swiss Oil Corp. 21 . . . 8
M. E. Ferguson, Swiss Oil Corp. 13 . . . 7
Sanford Lyon, Swiss Oil Corp. 31 . . . 30
District 32—P. P. Holbrook, Swiss Oil Corp. 43 . . . 10
P. P. Holbrook, Swiss Oil Corp. 44 . . . 8
Mrs. Proctor Sparks, Swiss Oil Corp. 31 . . . 8
Esta Walters, Wheeler-Watkins Oil & Gas 2 . . . 5
District 33—Geo. Evans, Swiss Oil Corp. 18 . . . 5
Geo. Evans, Swiss Oil Corp. 19 . . . 4
J. M. Fyffe, Swiss Oil Corp. 20 . . . 10

Wells completed . . . 17
Production . . . 132

JOHNSON-MAGOFFIN COUNTIES

District 25—Gordon Blanton, Atlantic Oil Prod. 21 . . . 10
District 29—Oscar Wheeler, Hudson & Collins 10 . . . 3
Years Hale, R. G. Gillespie Est. 3 . . . 15
District 31—J. H. Arnett, Bed Rock Petroleum 23 . . . 30
Salyer heirs, Oliver Jenkins 8 . . . 30
J. M. Adams, No. 2 Elkhorn Coal & Model Oil 3 . . . 15
J. M. Adams, No. 2, Elkhorn Coal & Model Oil 4 . . . 15
R. L. Sayler No. 2, Burning Fork Syndicate 2 . . . 15
District 30—Kelly Owens, The Wilson Oil 4 . . . 5

Wells completed . . . 9
Production . . . 138

FLOYD COUNTY

District 21—A. J. Allen, Midas Oil 4 . . .
District 21—A. J. Allen, New Domain Oil & Gas 5 . . . dry
T. G. Martin, Midas Oil 4 . . . gas

Wells completed . . . 2
Dry . . . 1
Gas . . . 1

MORGAN COUNTY

District 6—Lennox Sawmill, W. B. Sandifer Trus. 1 . . . dry

CARTER COUNTY

Grayson—R. A. Carpenter, Rex-Pyramid Oil 1 . . . 5

TENNESSEE
CLAY COUNTY

West Fork Mill Creek-Barlow Langford, J. J. McClurkin & Co. 1 . . . 100
Pea Ridge—Riley Kerr, Comstock & Findlay 1 . . . dry

Wells completed . . . 2
Production . . . 100
Dry . . . 1

WARREN COUNTY
Rig

Bowling Green—Worden, C. B. Tannehill 2.

Wells Drilling

Bowling Green—Keller, Al. F. Hughes 1.
Covington Blk. 7, Wm. Zimmer 10.
Manhing, Gold Flash Oil 4.
Jas. Deathridge, A. B. Hudson Atty. 3.
J. Q. Adams, Palmer Oil Corp. 4.
Chas. Cox, A. T. Bannon 18.
E. Morgan, Stinson & Morrow 6.
J. W. Covington Blk. 8, Paul Cooksey 9.
Hundley-Walters, W. Roy Hogan 3.
Georgie Ann Davenport No. 2, T. A. Sheridan 6.
R. C. Smith, H. V. Taylor Atty. 20.
J. W. Pugh, Geo. McGinley 22.
Ora S. Davenport 25-A, Ruther Turner 5.
Besse Snell Clark, New Domain Oil & Gas 5.
Rigs, 1; wells drilling, 14. Total, 15.

ALLEN COUNTY
Wells Drilling

Scottsville—W. M. Hall, Reher & Co. 1.
John Farley, Reaher & Co. 1.
Lon Oliver, Cyphus & Harley 5.
S. & K. Thratton, Vic DeCaigney 7.
E. Newman, Bastrus & Co. 3.
Angel Merdith, G. W. Hahn 11.
Frank Gibson, O. M. Widdowson 6.
J. W. Frost, W. G. Moorman Rec. 14.
M. J. Lewis, Mealey & Mealey 20.
John Meador, Chas. Foster 5.
Wells drilling, 10.

BARREN COUNTY
Wells Drilling

Emery Moore Pool—Marshall, Unknown 1.
W. E. Steffey, Ruby Oil & Gas 7.
W. E. Steffey, Seems & Co. 3.
Mayfield, Houchins Leasehold 16.
Wilson, Phil Kopel 3.
Howard, Fred C. Moore 13.
Hall-Baker Pool—R. E. Evans, Harrington & Norris Bros. 12.
Hall Baker, Consolidated Gas 10.
Hutcherson, Wood Oil 1.
Redman, Wood Oil 7.
Gorby Pool—Richardson, Richardson Farm Oil 4, 5.
Richardson, Lew J. Emery Jr. Son. 3.
Dickens, Lew J. Emery Jr. Son. 3.
Jim Jones, Lew J. Emery Jr. Son. 6.
Everette, Kopel Oil 2.
Whitney, Wood Oil 1.
Whitney, Wood Oil 1.
Ralston, Sanson & Bowers 1.
Carver, Zeigler Bros. 1.
Dearing, Watson Oil 3.
T. L. Gorby, Helper & Gorby 6.
Cassady, Hiland Oil & Gas 18.
Lessenberry, T. L. Gorby & Co. 3.
Hatfield, J. J. Sayre 4.
M. S. Chamberlain, Houchins Leasehold 1.
Beaver Creek—Maddox heirs, Harrington & Norris Bros. 2.
Duff, Consolidated Gas 13.
Knob Road—Richardson, Star Oil & Gas 8, 9, 10.
Harrison, Wiggins & Gillespie 4.
C. D. Boyd, Zeigler Bros., 4.
Dawder, Zeigler Bros. 1.
Tompkinsville Road—Mattis, Baker & Co. 1.
Oil City Pool—Allen, Lew J. Emery Jr. Son. 1.
Leeds Pool—Spencer, Wiggins & Gillespie 1.
Bunch, Lew J. Emery Jr. Son. 1.
Grady, Coombs & Co. 3.
Morgan, Baird & DeCaigney 4.
C. B. Jones, Esslinger Oil 9.
Richardson Pool—Davidson, Houchins Leasehold 4.
Riley Scriminger, William Christian 1.
Etoil Area—C. E. Spradlin, Wood Oil 1.
Greer, Wood Oil 1.
Wells drilling, 44.

OWENSBORO DISTRICT
(Hancock-Ohio-Daviess Counties)

Owensboro—J. T. Trogden, Johnson & Engle 1.
Will Howard, Petroleum Extraction 1.
J. W. McDaniel, Security Oil 1.
Cicero Whittenhill, Lew J. Emery Jr. & Son. 1.
W. S. Gabbard, Bert Thompson 3.
J. L. Stinnett, Rex-Pyramid Oil 1.
Laura Mercer 108-A, Penn-Indiana Synd 2.
Laura Mercer, Penn. Indiana Synd. 8.
J. L. Phillips, Penn-Indiana Synd. 8.
C. A. Kelley, Penn-Indiana Synd. 3.
Orvis Greer, Penn-Indiana Synd. 1.
Howard, White Plains Oil & Gas 1.
J. J. Midkiff, White Plains Oil & Gas 5.
John C. Ward, White Plains Oil & Gas 3.
J. R. Ellis 50-A, White Plains Oil & Gas 4.
Drane-Owens, Wood Oil 1.
J. U. Bartley, Wood Oil 5.
W. T. & E. Bickett, C. E. Daugherty & Co. 1.
L. Crowe, C. E. Daugherty & Co. 13.
Oat Neal, C. E. Daugherty & Co. 2.
Nannie J. Brown, Chicago Petroleum Synd. 2.
Guenther-Gant, Chicago Petroleum Synd. 9.
Joe Bob Ellis 50, J. W. Loman Trus. 4, 5.
E. L. Farmer, C. A. Leeper 1.
Weddenfield, George Randolph 2.
Pegram, C. C. Chrysler & Co. 1.
Bert Thompson 40-A, Spice Knob Oil 6.
O. T. Burdette, Vicion Oil Co. 10.
Allie Evans, E. M. Stebbins 1.
Ellis-Sheflı, Ohio Oil 2.
Wells drilling, 31.

CUMBERLAND-MONROE COUNTIES
Rigs

Crocus Creek—Sand Lick, Berthold & Waddle 1.
E. H. Brockman, Wood, Hinslett & McLennon 3.
F. Baker, Baird & Hickman 2.

Wells Drilling

Crocus Creek—Fulton Grider, Baird & Hickman 3.
Patterson, Phillippi & Co. 1.
Hi. Jackman, Crawford & Co. 1.
Sadie Bledsone, J. F. Bolinger 1.
Sulphur Creek—Davidson, Wilcox Bros. 1.
J. B. Riddle, Hook & McComas 2.
A. A. Huddleston, Southern Producers 10.
West Fork—C. T. Cheatham, Alta Oil 3.
Bear Creek—J. A. Dickens, E. M. Treat & Co. 7.
Steel Fork—Sarah Shackles, Wilcox Bros. 5.

Rigs, 3; wells drilling, 10. Total, 13.

SIMPSON COUNTY
Wells Drilling

Franklin—John Price, McMullen & Riegel 3.
Holeman, Lincoln Oil Producing 3.
Wells drilling, 2.

CASEY COUNTY
Rig

Near Avon—T. B. Hammonde, Col. Less Combest 1.

Wells Drilling

Dunville—Ben Russell, Irwin & Anschutz 1.

Rig, 1; well drilling, 1. Total, 2.

CLINTON COUNTY
Wells Drilling

Wolfe River—Pierce Bros. McClintock & Co. 1.

EASTERN DIVISION

WAYNE COUNTY

District 13—Nancy L. Jones heirs, W. L. Souther 3.

Wells Drilling

District 2—James Dabney, Superior Oil Corp. 13.
District 3—Alfred Cooper, Bell & Back 13.
District 13—M. James Carter, Bert F. Edwards & Co. 2.
Oil Valley—Dabney, Wood Oil 1.

Rig, 1; wells drilling, 4. Total, 5.

LEE-OWSLEY COUNTIES
Wells Drilling

District 18—Flahaven Land, Ohio Oil 83.
Wylie Bryant, Cook & Co. 2.
District 36—Thos. Foreman, Rex-Pyramid Oil 1.
Thomas Foreman, Standard Oil of Ky. 1.
Thomas Foreman, C. B. Gross, Trus. 2.
Baker, Watkins & Co. 1.
Drain heirs, Henry Oil 1.
Wells dirlling, 7.

ESTILL COUNTY
Wells Drilling

District 7—John Bill Rogers, Mt. Springs Oil 14.
Malissa Rogers, Mt. Springs Oil 3.
C. B. Howell, C. B. Howell, Trus. 4.
District 8—Millard Ballard, Reno Oil 8.
Oscar Tipton heirs, Reno Oil 8.
Wm. Neal, Wood Oil 10.
Simp Horn, Superior Oil Corp. 12, 15, 16.
Wells drilling, 9.

Rig

District 6—Spencer heirs, Petroleum Exploration 4.

LAWRENCE-JOHNSON COUNTIES
Wells Drilling

District 22—Caney Sparks, Swiss Oil Corp. 13.
John M. Sparks, Holland & Wade 5.
W. W. Bailey, Garrison & Townsend 6.
District 22-A—Martha Kelley, Swiss Oil Corp. 15.
Sanford Lyon, Swiss Oil Corp. 32.
C. K. Dobyne No. 1, Swiss Oil Corp. 32.
M. E. Ferguson, Swiss Oil Corp. 14.
Jesse Lyons, Keaton Oil & Gas 33.
District 32—J. J. Gambill, Swiss Oil Corp. 44.
District 33—Nora Lemaster, J. N. Meek Trus. 4.
J. M. Fyffe, Swiss Oil Corp. 21.
Geo. Evans, Swiss Oil Corp. 20.
Blaine District—Devils Fork, N. E. Schwartz 1.

Wells drilling, 18.

JOHNSON-MAGOFFIN COUNTIES
Rigs

District 25—W. H. Collins, Petroleum Exploration 3.
District 27—Eliza Powers, Clyde Oil 6.
Bailey heirs, Cobb & Lucas 7.

Wells Drilling

District 25—L. C. Bailey, Cumberland Petroleum 42.
District 27—Cholly Conley, Ky-Indiana Oil Trust 7.
Ben M. McCormick, Burton Fork Oil 9.
Sam Williams, S. J. Patrick 1.
District 29—W. H. Conley, Bed Rock Petroleum 30.
Mary Burke, R. G. Gillespie Est. 7.
Yearns Hale, R. G. Gillespie Est. 4.
John H. Gardner, New Domain Oil & Gas 14.
A. A. Almy, Cumberland Petroleum 7.
District 31—W. E. Patrick, Bed Rock Petroleum 5.
B. F. Whitt, Hupp, Duff & Co. 1.
H. H. May, South Fork Oil 9.
Boyd Bailey, Oliver Jenkins 1.
District 30—Sam Blanton, R. G. Gillespie Estate 20.
Lee Owens, Oliver Jenkins 2.
Bracken heirs, Phillips & Yough 4.
F. M. Tackett, F. M. Tackett 2.
Pelphrey heirs, Pelphrey Heirs 2.

Rigs, 3; wells drilling, 118. Total 21.

FLOYD COUNTY
Wells Drilling

District 21—Mouse Martin, Ohio Fuel Oil 3.
Mary Martin, Louisville Gas & Electric 3.
John Amburgy, Distill-Martin Oil & Gas 1.
S. C. Allen, Eastern Carbon Black 2.
Wells drilling, 4.

KNOX COUNTY
Wells Drilling

Bailey Switch-Dizney, Dizney & McKee, 1.
Sinking Creek—Foreman, Foreman Lumber Co. 1.
Red Bird Creek—Beattyville Parties 1.
Wells drilling, 3.

MORGAN COUNTY
Rig

District 6—Craney Creek Dome—Petroleum Exploration 1.

Wells Drilling

District 6—T. L. Elam, Popping Rock Oil 2.
West Liberty—Pleasant Run, Jim Patton 1.
Blair Mills, Collier & Co. 1.

Rig, 1; wells drilling, 3. Total, 4.

ELLIOTT COUNTY
Rig

District 34—D. A. Lewis, Smith & Garison 2.
Wells Drilling
District 34—I. M. Ison, Eldra Lee Oil &

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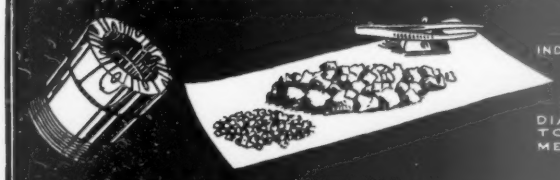

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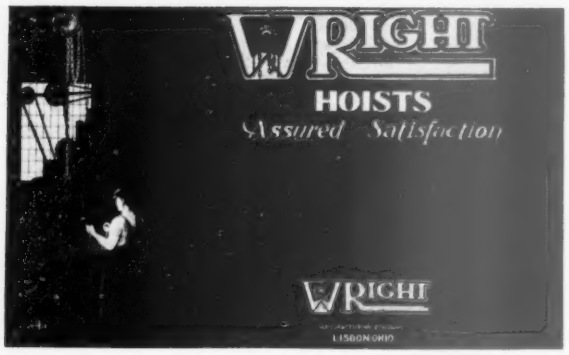

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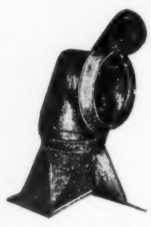

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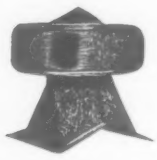

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Gas 3.
Lincoln Creek—Joe Wagner, J. M. McDonald 1.
Rocky Branch—Henderson, Eastern Gulf Oil 1.
Rig, 1; wells drilling, 3. Total 4.

MENIFEE COUNTY
Wells Drilling
Leatherwood—Widow Reed, McKinney Bros. 1.
Hamp Rawlins, W. O. Bach 3.
Wells drilling, 2.

LAUREL COUNTY
Well Drilling
10 M. S. W. of London, Standard Oil of Ky. 1.

JACKSON COUNTY
Well Drilling
McKee-Isaac, Standard Oil of Ky. 1.

GREENUP COUNTY
Rig
Greenup—J. H. Flannery, Petroleum Exploration 1.

CARTER COUNTY
Wells Drilling
Smokey Creek—Hi. Owens, R. A. Chiles 1.
Trough Camp Creek—Robbins & Watson 1.
Limestone—Carpenter heirs, Hovis, Young & Marcum 1.
Wells drilling, 3.

TENNESSEE

CLAY COUNTY
Wells Drilling
Clark Pool—J. M. Gray, H. Z. Clark & Co. 2.
A. T. Davis, Dixon, Bayless & Douglass 3.
Celina Field—Geo. Plumley, John B. Kerr 1.
Geo. Tinsley, Lewis & George 1.
Turkey Creek—Potter, Mendenthall & Co. 1.
Willow Grove—Widow Hargrave, Carnahan & Horn 2.
Jim Stover, A. A. Alexander 2.
Tinsley's Bottom—Hamp Lynn, Dafoe & Co. 9.
Wells drilling, 8.

MORGAN COUNTY
Wells Drilling
Sunbright—Somers, Cockrel & Co. 1.
Glades, Knoxville Parties 2.
Fee, Russell Producing 7.
Wells drilling 3.

OVERTON COUNTY
Wells Drilling
Livingstone—Monroe Anticline, Heiser & Elder 1.
Copeland Cove Anticline—H. R. Guard 1.
Wells drilling, 2.

MISSISSIPPI

FRANKLIN COUNTY
Rig
Jackson—Pear River, New York Parties 1.

COPIAH COUNTY
Rig
Hazlehurst—Brandywine, B. W. White 1.

HOLMES COUNTY
Rig
Coxburg—Section 18-13-1, Freeun Oil 1.

LEAKE COUNTY
Rig
Near Conway—Chas. N. Haskell 1.

KOSCIUSKI COUNTY
Rig
At Alta—B. B. Jones 1.

CLAIBORNE COUNTY
Wells Drilling
Section 5-11-2—Young, Mississippi Exploration 1.
West Side County—Michael Zink 1.
Wells drilling 2.

YAZOO COUNTY
Section 25-13-1w—Reed & Burns 1.

HINDS COUNTY
Well Drilling
Jackson—Reeder, Johnson Oil 1.

WASHINGTON COUNTY
Well Drilling
Section 30-14-9—Glen Allens—Williams, Alhambra Oil 1.

TISHIMINGO COUNTY
Well Drilling
Iuka—Unknown parties 1.

TALLAHATCHIE COUNTY
Well Drilling
Section 23-25-2—Harvey, Shreveport parties 1.

MARSHALL COUNTY
Well Drilling
Section 3-32-3—Hoffman, Tom Slick 2.

MADISON COUNTY
Well Drilling
Unknown—Transcontinental Oil 1.
Rigs, 5; wells drilling, 9. Total, 14.

ALABAMA

MORGAN COUNTY
Well Drilling
Section 6-6-4—English, Decatur Oil 1.

HALE COUNTY
Well Drilling
Greensburg—Hale Oil 1.

SHELBY COUNTY
Well Drilling
Chelsea—Scott, Cooksey Oil 1.

WILSON COUNTY
Well Drilling
Selma—Blue Belle Oil 1.
Wells drilling, 4.

FLORIDA

POLK COUNTY
Well Drilling
West Frostproof—West Frostproof L. & Oil 1.

VENEZUELA OPERATIONS

CHATHAM, Aug. 7.—It is announced that in the Venezuela fields the Maxudian Petroleum Corp. has leased to the Wampum Petroleum Corp., which is controlled by Frankel Brothers, two parcels of acreage on Lake Maracaibo, Venezuela. These parcels are in the vicinity of the famous La Rosa well, and north of the new field recently opened by the Gulf Oil Co. on the Venezuela Petroleum Co.'s property. Joint drilling arrangements have been made by the Wampum and Gulf companies which have erected a derrick and are now drilling on this acreage.

HERBERT E. WILLIAMS
Geologist and Valuation Engineer
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WHAT AND WHERE TO BUY

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Hammers—Chipping and Caulking Pneumatic—
Chicago Pneumatic Tool Co.

Hammers—Riveting Pneumatic—
Chicago Pneumatic Tool Co.

Hangers—Iron and Steel—
Continental Supply Co.
Dodge Mfg. Corp.

Hangers—Tubing—
Hercules Tool Co.

Hatches—Gauges and Thief—
Oil Conservation Engineering Co.

Heat Exchangers—
Carbondale Machine Co.
Griscom-Russell Co.
Hope Engineering & Supply Co.
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.

Heat Interchangers—Fluid—
Braun, C. F., & Co.
Ross Heater & Mfg. Co., Inc.

Hoists—Pneumatic, Geared and Universal—
Chisholm-Moore Mfg. Co.
Yale & Towne Mfg. Co.

Hoists—Portable—
Chisholm-Moore Mfg. Co.
Ford Chain Block Co.
Sullivan Machinery Co.
Wright Mfg. Co.
Yale & Towne Mfg. Co.

Hooks for Rods and Tubing—
B. & A. Specialty Co.
Dunn Mfg. Co.

Hose—
Fenwick-Reddaway Mfg. Co.

Hose—Drillers—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Oil Suction and Discharge
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Hose—Rubber—
Goodyear Tire & Rubber Co.
United States Rubber Co.

Hypochlorite of Lime—
Mathieson Alkali Works, Inc.

I

Injectors—
Penberthy Injector Co.

Inspectors—Pipe—
Hunt, Robert W., Co.

Insulation Materials—
Celite Products Co.
General Insulating & Mfg. Co.
Johns-Manville, Inc.

Insurance—Fire—
Oil Insurance Association

Insurance—Tornado—
Oil Insurance Association.

Iron—Ingot—
American Rolling Mill Co.

J

Jacks—Hydraulic—
Bridgeport Machine Co.

Jacks—Lifting—
Templeton, Kenly & Co., Ltd.

Jacks—Pumping—
American Mfg. Co. of Texas.
American Wells Works.
Bessemer Gas Engine Co.
Braden Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
Norris, W. C.
Spang & Co.

Jars—
Arbon, Paul, & Co.
Bridgeport Machine Co.
Spang & Co.

Jar Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

K

Kerosene—
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.

L

Lacquers—
Arco Company, The
Sherwin-Williams Co.

Lanterns—Electric—
Delta Electric Co.

Lead and Mixed Metal Products—
Eagle-Picher Lead Co.
National Lead Co.

Lead in Oil—
Eagle-Picher Lead Co.
National Lead Co.

Lead Wool and Containers—
Eagle-Picher Lead Co.

Lighting Equipment—
Pyle National Co.
Westinghouse Electric & Mfg. Co.

Litharge—
Eagle-Picher Lead Co.
National Lead Co.

Loaders—Trucks—
Barber-Greene Co.

Long Distance Telephone—
American Telephone & Telegraph Co.

Lubricating Devices—
McCord Radiator & Mfg. Co.

Lubricators—
Ajax Iron Works.
Lunkenheimer Co.

Lubricators—Force Feed—
Hills-McCanna Co.
McCord Radiator & Mfg. Co.
Manzel Brothers Co.

M

Machine Tools—
Ryerson, Jos. T., & Sons, Inc.

Manholes—Tank—
Brooks Engineering Corp.

Manifolds—
Reid, Joseph, Gas Engine Co.

Meters—Gas—
Equitable Meter & Mfg. Co.
Foxboro Co., Inc.
Metric Metal Works.
Pittsburgh Meter Co.
Roots, P. H. & F. M., Co.
Westcott & Greis.

Meters—Electric—
Brown Instrument Co.

Meters—Gasoline—
Pittsburgh Meter Co.

Meters—Oil—
Pittsburgh Meter Co.

Molded Goods—Rubber—
Goodyear Tire & Rubber Co.

Motors—Electric—
Fairbanks-Morse & Co.
Westinghouse Electric & Mfg. Co.

Motors—Gasoline (See Engines—Gasoline)—

N

Naphtha—
Pure Oil Co.

Natural Gasoline (See Gasoline—Natural)—

Natural Gasoline Plant Equipment
Campbell, J. A.
Cooper, C. & G. Co.
Griscom-Russell Co.
National Gas Products Co.
Roots, P. H. & F. M., Co.
Ross Heater & Mfg. Co., Inc.
Smith Separator Co.
Westcott & Greis.

Nitrogen—
Linde Air Products Co.

Nozzles—Spray—
Power Plant Equip. Co.

O

Oil and Gas Pipe Line Construction—
Hope Engineering & Supply Co.

Oil Burners (See Burners—Oil)—

Oil Field Equipment—
Baker Casing Shoe Co.
Bridgeport Machine Co.
Gaso Pump & Burner Mfg. Co.
International Derrick & Equipment Co.
Iron King Mfg. Co.
Kaw Steel Construction Co.
National Supply Co.
Oil Well Supply Co.
Parkersburg Machine Co.
Parkersburg Rig & Reel Co.
Reed Roller Bit Co.
Regan Forge & Engineering Co.
Reid, Joseph, Gas Engine Co.
Republic Supply Co.
Simplex Equipment Co.
Trumble Gas Trap Co.

Oil—Fuel—
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The

Oil—Gas—
Crown Central Petroleum Corp.
Gulf Refining Co.
Pure Oil Co.
Sinclair Refining Co.
Texas Company, The

Oil—Lubricating—
Barnsdall Refining Co.
Crown Central Petroleum Corp.
Empire Refineries, Inc.
Gulf Refining Co.
Humble Oil & Refining Co.
Magnolia Petroleum Co.
Pure Oil Co.
Sinclair Refining Co.
Skelly Oil Co.
Texas Company, The

Oil—Tractor—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.
Skelly Oil Co.

Oiling Devices—
Lunkenheimer Co.

Oil Meters (See Meters)—

Oil Piping Equipment (See Fittings)—

Oil Reclaiming Process—
Barnickel, Wm. S., & Co.
Houston Pump & Supply Co.

Oil Well Cementing—
Halliburton Oil Well Cementing Co.

Oil Well Tools—
D & B Pump & Supply Co.
Hinderliter Tool Co.
Reed Roller Bit Co.
Titusville Forge Co.
U. S. Tool Co.

Over Shots—
Reed Roller Bit Co.
Regan Forge & Engineering Co.

Oxygen—
Linde Air Products Co.

P

Packer Release—
Acme Fishing Tool Co.

Packers—
Goodyear Tire & Rubber Co.
Guiberson Corp.
Larkin & Co.
Layne & Bowler Co.
Meier, E. C., Lubricating Co.
Oil Well Supply Co.
Regan Forge & Engineering Co.
Spang & Co.
United States Rubber Co.

Packing—
Crane Packing Co.
Durabla Mfg. Co.
Garlock Packing Co.
Goodrich, B. F., Rubber Co.
Imperial Belting Co.
Johns-Manville, Inc.

Packing—Metallic—
Crane Packing Co.

Paint Guns—
Binks Spray Equipment Co.

Painting Equipment—Mechanical
Matthews, W. N., Corp.

Paints—
Aluminum Co. of Amelca
American Asphalt Paint Co.
Arco Company, The
Cook Paint & Varnish Co.
Detroit Graphite Co.
Dixon, Joseph, Crucible Co.
Du Pont de Nemours, E. I. & Co., Inc.
Eagle-Picher Lead Co.
Eclipse Paint & Mfg. Co.
Hill, Hubbell & Co.
National Lead Co.
Sherwin-Williams Co.
St. Louis Surfacer & Paint Co.

Pipe—Cast Iron—
Greenspon's Jos., Sons Iron & Steel Co.
International Supply Co.
U. S. Cast Iron Pipe & Fdy. Co.

Pipe—Lead Chemical and Antimonial—
Eagle-Picher Lead Co.
National Lead Co.

Pipe—Steel—
Central Tube Co.
Continental Supply Co.
Greenspon's Jos., Sons Iron & Steel Co.
Jarecki Mfg. Co.
Kellogg, M. W., Co.
Murray Teol & Supply Co.
National Supply Co.
National Tube Co.
Republic Iron & Steel Co.
Ryerson, Jos. T., & Sons, Inc.
South Chester Tube Co.
Spang Chalfant & Co., Inc.
Superior Tube Co.
Wheeler Steel Corp.

Pipe—Wrought Iron—
Byers, A. M., Co.
Frick-Reid Supply Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Oil Well Supply Co.
Reading Iron Co.
South Chester Tube Co.
Superior Tube Co.

Pipe and Nipple Threading Machines—
Bignall & Keeler Machine Works.
Cox & Sons Co., The
Landis Machine Co.
Ryerson, Jos. T., & Sons, Inc.

Pipe Clamps (See Clamps—Pipe)

Pipe Grips—
Larkin & Co.

Pipe Headers—
National Tube Co.
Newton Process Mfg. Co.

Pipe Line Coatings—
Hill, Hubbell & Co.

Pipe Line Construction Tools—
National Transit Pump & Machine Co.

Pipe Line Equipment—
Gaso Pump & Burner Mfg. Co.
Wheatley Bros. Machine Works

Pipe Screwing Machines—
Buckeye Traction Ditcher Co.

Pipe Straightening Machines—
W-K-M Co., Inc.

Pipe Suspension Device—
Stearns-Roger Mfg. Co.

Pipe Threaders—Power—
Williams Tool Corp.

Pipe Tools—
Armstrong Brothers Tool Co.
Nye Tool & Machine Works
Ridge Tool Co.
Walworth Co.

Piping—Fabricated—
Midwest Piping & Supply Co.

Piping—Hard Rubber—
United States Rubber Co.

Piping—Steel & Iron—
Crane Co.
Greenspon's, Jos., Sons Iron & Steel Co.
Power Piping Co.

Pistons—
Guiberson Corp.
Heppenstall Forge & Knife Co.

Pistons—Expansion—
Wilson Oil Tools Corp.

Pistons—Slush Pump—
Guiberson Corp.

Plugs—Bottom Water—
Guiberson Corp.

Pre-Heaters—
National Gas Products Co.
Newton Process Mfg. Co.
Ross Heater & Mfg. Co., Inc.

Preservatives—Asphalt—
American Asphalt Paint Co.

Pulleys—Wood, Iron and Steel—
Continental Supply Co.
Dodge Mfg. Co.

Pulling Machines—
Iron King Mfg. Co.
National Supply Co.
Safety Pulling Machine Co.

Pumpers—Long Stroke—
Farley Machine Co.

Pumping and Pulling Motors—Electric—
Westinghouse Electric & Mfg. Co.

Pumping Equipment—
American Well Works.
Axelson Machine Co.
Bryson Jackson Pump Mfg. Co. Inc.
D & B Pump & Supply Co.
Farley Machine Co.
Goulds Pumps, Inc.
Jones, S. M., Co.
Myers, F. E., & Bros. Co.
Northrup Equipment Co.
Oil Well Supply Co.
Prescott Co.
Ratigan, J. P., Co.
Waukesha Motor Co.

Pumping Gear Units—
Nuttall, R. D., & Co.

Pumping Powers—
Bessemer Gas Engine Co.
Buda Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
Kansas City Hay Press Co.
Marion Mch., Fdy. & Supply Co.
National Supply Co.
Oil Well Supply Co.
Pattin Bros. Co.
Reid, Joseph, Gas Engine Co.
Spence Machine Co.
Titusville Iron Works Co.

Pumps—Boiler Feed—
Ajax Iron Works.
Byron Jackson Pump Mfg. Co. Inc.
Fairbanks-Morse & Co.
Gardner Governor Co.
Goulds Pumps, Inc.
Oil Well Supply Co.
Smith Separator Co.

Pumps—Centrifugal—
American Well Works.
Byron Jackson Pump Mfg. Co. Inc.
Fairbanks-Morse & Co.
Goulds Pumps, Inc.
Smith Separator Co.
Worthington Pump & Machinery Corp.

Pumps—Direct Driven—
Bessemer Gas Engine Co.
Smith Separator Co.

Pumps—Electric—
Prescott Co.
Smith Separator Co.

Pumps—Fuel Oil Service—
Blackmer Pump Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Smith Separator Co.

Pumps—Fuel Oil Transfer—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.

Pumps—Gasoline and Oil for Filling Stations—
Gilbert & Barker Mfg. Co.

Pumps—Gear Driven—
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
Prescott Co.
Smith Separator Co.

Pumps—Hot Oil—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.
Goulds Pumps, Inc.
Smith Separator Co.

Pumps—Pipe Line—
Byron Jackson Pump Mfg. Co., Inc.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Prescott Co.
Wheatley Bros. Machine Works
Worthington Pump & Machinery Corp.

Pumps—Portable—
Gaso Pump & Burner Mfg. Co.

Pumps—Power—
Fairbanks-Morse & Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Myers, F. E., Bro. & Co.
National Transit Pump & Machine Co.
Prescott Co.
Smith Separator Co.
Waukesha Motor Co.

Pumps—Refinery—
Blackmer Pump Co.
Byron Jackson Pump Mfg. Co., Inc.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
National Transit Pump & Machine Co.
Northern Fire Apparatus Co.
Smith Separator Co.

Pumps—Rotary—
Blackmer Pump Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Roots, P. H. & F. M., Co.

Pumps—Sand—
Bridgeport Machine Co.
Larkin & Co.
Smith Separator Co.

Pumps—Slush—
Gardner Governor Co.

Pumps—Steam—
Fairbanks-Morse Co.
Frick-Reid Supply Co.
Gardner Governor Co.
Gaso Pump & Burner Mfg. Co.
Lucey Mfg. Corp.
National Transit Pump & Machine Co.
Oil Well Supply Co.
Prescott Co.
Smith Separator Co.

Pumps—Suction—
Gaso Pump & Burner Mfg. Co.

Pumps—Vacuum—
Bessemer Gas Engine Co.
Chicago Pneumatic Tool Co.
Clark Brothers Co.
Gaso Pump & Burner Mfg. Co.
Miller Improved Gas Engine Co.
Roots, P. H. & F. M., Co.
Ross Heater & Mfg. Co., Inc.
Smith Separator Co.

Pumps—Water—
American Well Works.
Byron Jackson Pump Mfg. Co., Inc.
Gaso Pump & Burner Mfg. Co.
Goulds Pumps, Inc.
Northern Fire Apparatus Co.
Prescott Co.
Smith Separator Co.

Pyrometers—
Brown Instrument Co.
Republic Flow Meters Co.

R

Ratchet Pipe Cutters—
Toledo Pipe Threading Machine Co.

Ratchet Pipe Threaders—
Nye Tool & Machine Works
Toledo Pipe Threading Machine Co.

Ratchet Reamers—
Nye Tool & Machine Co.

Ratchet Stocks and Dies—
Nye Tool & Machine Co.
Toledo Pipe Threading Machine Co.

Receiving Boxes—
Reid, Joseph, Gas Engine Co.

Recorders—Differential Pressure—
Equitable Meter & Mfg. Co.
Metric Valve Works.

Refinery Equipment—
American Radiator Co.
Blaw-Knox Co.
Braun, C. F., & Co.
Carbondale Machine Co.
Chicago Bridge & Iron Works
Cross Engineering Co.
Graver Corp.
Griscom-Russell Co.
Kellogg, M., W. Co.
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Appliance Co.
Petroleum Iron Works Co.
Power Piping Co.
Power Specialty Co.
Reid, Joseph, Gas Engine Co.
Ross Heater & Mfg. Co., Inc.
Ross-Meehan Foundries.
Smith, A. O., Corp.
Smith Separator Co.
Southwestern Engineering Co., Inc.
Southwestern Engineering Corp.
United Iron Works, Inc.
Universal Oil Products Co.
Vogt, Henry, Machine Co.
Walsh & Weidner Boiler Co.
Westcott & Greis.
Widdell Engineering Co.

Refractories—Furnace, Stills and Baffles—
Botfield Refractories Co.
National Gas Products Co.

Refrigerating Machinery—
Carbondale Machine Co.
United Iron Works, Inc.
Vogt, Henry, Machine Co.

Regulators—
Fisher Governor Co.
Oilfillan Machine Works.
Smith Separator Co.

Regulators—Gas—
Chaplin-Fulton Mfg. Co.
Davis, G. M., Regulator Co.
Equitable Meter & Mfg. Co.
Fisher Governor Co.
Metric Metal Works.
National Gas Products Co.
Smith Separator Co.

Rental Service—
Bridgeport Machine Co.

Reversible Clutches—
Bessemer Gas Engine Co.

Rig Irons—
International Supply Co.
Lucey Mfg. Corp.
National Supply Co.
Oil Well Supply Co.
Parkersburg Rig & Reel Co.

Rigs—Drilling, All Steel—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Rigs—Portable Drilling—
National Supply Co.
National Turnbuckle Derrick Co.
Star Drilling Machine Co.

Rod Guides—
Meier, E. C., Lubricating Co.

Rods—Gauge—
Missouri Woodworking Co.

Rods—Polish—
Jones, S. M., Co.

Rods—Pull—
Axelson Machine Co.
Columbus Sucker Rod Co.
Jones, S. M., Co.
Sheffield Steel Corp.

Rods—Sucker—
Axelson Machine Co.
Columbus Sucker Rod Co.
D & B Pump & Supply Co.
Frick-Reid Supply Co.
Jones, S. M., Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Sheffield Steel Corp.

Rods—Valve—
Jones, S. M., Co.

Roofing—Asbestos—
Johns-Manville, Inc.

Roofing—Galvanized Iron—
American Rolling Mill Co.

Rope Socket Metal—
Eagle-Picher Lead Co.

Rope—Manila—
Ajax Rope Co., Inc.
Bovaird Supply Co.
Republic Supply Co.

Rope—Wire—
Ajax Rope Co., Inc.
American Cable Co.
Bovaird Supply Co.
Bridgeport Machine Co.
Broderick & Bascom Rope Co.
International Supply Co.
Jarecki Mfg. Co.
Leschen, A. & Sons, Rope Co.
Wickwire-Spencer Steel Corp.
Williamsport Wire Rope Co.

Rotary Bit Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Rotary Drilling Equipment—
Emsco Derrick & Equipment Co.
Frick-Reid Supply Co.
International Derrick & Equipment Co.
Link-Belt Co.
Lucey Mfg. Co.
National Supply Co.
Oil Well Supply Co.
Republic Supply Co.
Titusville Iron Works Co.

Rotary Lines (See Rope—Wire)—

Rotary Post—
Reed Roller Bit Co.

Rotary Tool Joints—
Bartlesville Supply Co.
Hughes Tool Co.

Rust Preventatives—
Dearborn Chemical Co.
Eagle-Picher Lead Co.

S

Sand Lines—Manila—
Ajax Rope Co., Inc.
Plymouth Cordage Co.

Sand Lines—Wire—
Ajax Rope Co., Inc.
Broderick & Bascom Rope Co.
Hazard Mfg. Co.
Wickwire-Spencer Steel Corp.

Screens—Oil Well—
Layne & Bowler Co.

Screens—Water Well—
Layne & Bowler Co.

Screws Temper—
Burns Tool Co.

Securities—Oil—
Pforzheimer, Carl H., & Co.

Separators—Centrifugal—
Miller, Max B., & Co.

Separators—Gas and Oil—
Smith Separator Co.

Separators—Steam—
Volz Engineering Equipment Co.

Sheet Lead—Chemical and Antimonial—
Eagle-Picher Lead Co.

Sheets—Corrugated, Black and Galvanized—
American Rolling Mill Co.
American Sheet & Tin Plate Co.
Ryerson, Jos. T., & Son, Inc.
United Alloy Steel Corp.

Sheets—Iron—
American Rolling Mill Co.

Sheets—Steel—
American Sheet & Tin Plate Co.
Sheffield Steel Corp.
United Alloy Steel Corp.

Shingles—Asbestos—
Johns-Manville, Inc.

Siding—Galvanized Iron—
American Rolling Mill Co.

Sleeves—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Sleeves—Split—
Dayton Pipe Coupling Co.
Dresser, S. R., Mfg. Co.

Smoke Stacks—
Donovan Boiler Works.

Snuffers—Fire—
Simplex Equipment Co.

Sockets—
Acme Fishing Tool Co.
Bridgeport Machine Co.
Spang & Co.

Sockets—Sucker Rod—
Guiberson Corp.

Sockets—Swivel—
Arbon, Paul, & Co.

Sockets—Wire Rope—
Chicago Steel Foundry Co.

Soda Ash—
Mathieson Alkali Works, Inc.

Soda—Caustic—
Mathieson Alkali Works, Inc.

Solders—Bar and Wire—
Eagle-Picher Lead Co.
Hoyt Metal Co.

Spark Plugs—
Mosler Metal Products Corp.

Spears—
Acme Fishing Tool Co.
Brown Tool Co., Inc.

Sprockets—Power Transmission—
Ajax Iron Works
Chain Belt Co.

Stands—Vice—
Nye Tool & Machine Works

Steel—All Kinds—
Ryerson, Jos. T., & Son, Inc.

Steel—Alloy—
Central Steel Co.
Timken Roller Bearing Co.
United Alloy Steel Corp.

Steel—Bit—
Central Steel Co.
United Alloy Steel Corp.

Steel—Hot Rolled Strip—
Central Steel Co.

Steel—Special—
Andrews Steel Co.
Central Steel Co.
United Alloy Steel Corp.

Steel Fabricators—Structural—
Austin Co.
Braden Co.
Graver Corp.
International Derrick & Equipment Co.

Steel Pitmans—
International Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Steel Plate Construction—
Chicago Bridge & Iron Works
Graver Corp.
Kaw Steel Construction Co.
Pennsylvania Engineering Wks.
Petroleum Iron Works Co.
Vogt, Henry, Machine Co.

Steel Wheels and Tug Rims—
International Derrick & Equipment Co.

Stills—
Blaw-Knox Co.
Chicago Bridge & Iron Works
Graver Corp.
Kaw Steel Construction Co.
Kellogg, M. W., Co.
McKee, Arthur G., & Co.
Newton Process Mfg. Co.
Petroleum Iron Works Co.
Smith, A. O., Corp.
Vogt, Henry, Machine Co.
Widdell Engineering Co.

Stocks and Dies—
Borden Co.
Nye Tool & Machine Works.
Toledo Pipe Threading Machine Co.

Stuffing Boxes—
Axelson Machine Co.
Kansas City Hay Press Co.

Sulphuric Acid—
Eagle-Picher Lead Co.

Superheaters—Steam—
Power Plant Equipment Co.

Swabs—
Arbon, Paul, & Co.
Burt Corporation.
Guiberson Corp.
Simplex Equipment Co.

Swedge Nipples—
Dresser, S. R., Mfg. Co.
Harrisburg Pipe & Pipe Bending Co.

Swing Line Equipment—
Brooks Engineering Corp.

Swivels—
Layne & Bowler Co.
Lucey Mfg. Corp.
Titusville Iron Works Co.

T

Tachometers—
Brown Instrument Co.

Tank Equipment—
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Tanks—Bolted—
Butler Mfg. Co.
Columbian Steel Tank Co.
Maloney Tank Mfg. Co.
Parkersburg Rig & Reel Co.

Tanks—Bulk Station—
Butler Mfg. Co.
Graver Corp.

Tanks—Cylindrical—
Graver Corp.
Petroleum Iron Works Co.

Tanks—Elevated Steel—
Chicago Bridge & Iron Works
Graver Corp.

Tanks—Field Storage—
American Car & Foundry Co.
Donovan Boiler Works.
Graver Corp.
Kaw Steel Construction Co.
Kewanee Boiler Co.
Maloney Tank Mfg. Co.
Petroleum Iron Works Co.
Pittsburgh-Des Moines Steel Co.
Riter-Conley Co.
United Iron Works, Inc.

Tanks—Horizontal Storage—
Graver Corp.
Kaw Steel Construction Co.
Maloney Tank Mfg. Co.

Tanks—Run Down—
Donovan Boiler Works.
Graver Corp.
Kaw Steel Construction Co.
Newton Process Mfg. Co.

Tanks—Truck—
Butler Mfg. Co.
Columbian Steel Tank Co.
White Co.

Tanks—Underground—
Butler Mfg. Co.
Gilbert & Barker Mfg. Co.
Graver Corp.
Kewanee Boiler Co.
Pittsburgh-Des Moines Steel Co.

Tanks—Welded—
Chicago Bridge & Iron Works.
Graver Corp.
Pennsylvania Engineering Wks.

Taper Taps—
Hughes Tool Co.

Tapes—Measuring for Oil Gauging—
Lufkin Rule Co.
States Engineering Co.

Thermometers—Indicating and Recording—
American Schaeffer & Budenberg Corp.
Bristol Co.
Brown Instrument Co.

Thermometers—Resistance—
Brown Instrument Co.

Threading Machines—
Bignall & Keeler Machine Wks.
Cox & Sons Co., The
Landis Machine Co.

Thread Protectors—
Spang & Co.

Tires—Automobile—
Continental Supply Co.

Tires—Pneumatic & Solid—
Kelly-Springfield Tire Co.

Tires—Truck—
Kelly-Springfield Tire Co.

Tongs—
Bridgeport Machine Co.
Wilson Oil Tools Corp.

Tongs—Back Up—
Williams, J. H., & Co.

Tongs—Break Out—
Reed Roller Bit Co.
Williams, J. H., & Co.

Tongs—Casing —
Dunn Mfg. Co.
Guiberson Corp.

Tongs—Chain Pipe—
Armstrong Bros. Tool Co.
Williams, J. H., & Co.

Tongs—Pipe—
National Transit Pump & Machine Co.

Tongs—Rotary—
Dunn Mfg. Co.

Tongs—Tool Joint—
Guiberson Corp.
Hughes Tool Co.
Reed Roller Bit Co.

Tongs—Tubing—
Dunn Mfg. Co.

Tool Chests—Pipe—
Nye Tool & Machine Works.

Tool Joints—
Bridgeport Machine Co.
Federal Supply Co.
Hughes Tool Co.
Lucey Mfg. Corp.
Oil Well Supply Co.
Regan Forge & Engineering Co.

Torches—
Oxweld Acetylene Co.

Towers—
Graver Corp.

Tractors—
Cleveland Tractor Co.
International Harvester Co. of America.

Trailers—
Spencer Trailer Co.

Transmission Belt—Rubber—
Goodrich, B. F., Rubber Co.
United States Rubber Co.

Transmission Lining—
Stanley Belting Corp.

Traveling Block—
Lucey Mfg. Corp.
Regan Forge & Engineering Co.
Wright Mfg. Co.

Trenchers—Vertical Boom—
Barber-Greene Co.

Trucks—Motor—
Ford Motor Co.
General Motors Truck Co.
Graham Brothers.
International Harvester Co. of America.
White Co.

Tubes—Boiler, Charcoal Iron—
Byers, A. M., Co.
Reading Iron Co.

Tubes—Boiler Steel—
Continental Supply Co.
National Tube Co.
Ryerson, Jos. T., & Sons, Inc.

Tubing—
Babcock & Wilcox Tube Co.
Byers, A. M., Co.
Central Tube Co.
Continental Supply Co.
National Tube Co.
Pittsburgh Steel Products Co.
Reading Iron Co.
Republic Iron & Steel Co.
South Chester Tube Co.
Spang, Chalfant & Co., Inc.
Superior Tube Co.
Wheeling Steel Corp.

Tubing Catchers—
Dunn Mfg. Co.
Guiberson Corp.

Tubing Protectors (See Rod Guides)—

Tubular Goods—
Babcock & Wilcox Tube Co.
Central Tube Co.
Continental Supply Co.
Oil Well Supply Co.
Pittsburgh Steel Products Co.
Republic Iron & Steel Co.
Spang, Chalfant & Co., Inc.
Wheeling Steel Corp.

Tubular Goods—Wrought Iron—
Byers, A. M., Co.
Reading Iron Co.

Turbines for Lighting Equipment—
Lucey Mfg. Corp.
Westinghouse Electric & Mfg. Co.

U

Underreamer Body Steel—
Andrews Steel Co.
Heppenstall Forge & Knife Co.

Underreamers—
Bridgeport Machine Co.
Brown Tool Co., Inc.
Guiberson Corp.
Wilson Oil Tools Corp.

Unions—
Central Forging Co.
Dart, E. M., Mfg. Co.
Jefferson Union Co.

V

Valuations—
American Appraisal Co.

Valves—Blow-Off—
Homestead Valve Mfg. Co.
Merco Nordstrom Valve Co.

Valves—Brass & Bronze—
Homestead Valve Mfg. Co.
Lunkenheimer Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Cast Steel—
Chapman Valve Mfg. Co.
Homestead Valve Mfg. Co.
Walworth Co.

Valves—Check—
Gaso Pump & Burner Mfg. Co.
Lunkenheimer Co.
Walworth Co.

Valves—Drop Forged Steel—
Edwards Valve & Mfg. Co.
Vogt, Henry, Machine Co.

Valves—Gate—High and Low Pressure—
Chapman Valve Mfg. Co.
Crane Co.
Darling Valve & Mfg. Co.
Kennedy Valve Mfg. Co.
Kerotest Mfg. Co.
Ludlow Valve Mfg. Co.
Lunkenheimer Co.
Murray Tool & Supply Co.
Powell, Wm., Co.
Walworth Co.

Valves—Iron—
Chapman Valve Mfg. Co.
Lunkenheimer Co.
Merco Nordstrom Valve Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Metal Pump—
Durabla Mfg. Co.

Valves—Pump—
United States Rubber Co.

Valves—Relief—Supersensitive—
Davis, G. M., Regulator Co.

Valves—Steel—
Chapman Valve Mfg. Co.
Edward Valve Mfg. Co.
Kerotest Mfg. Co.
Lunkenheimer Co.
Metric Metal Works.
Powell, Wm., Co.
Reading Steel Casting Co.
Walworth Co.

Valves—Tank Vent—
Brooks Engineering Corp.
Oil Conservation Engineering Co.

Valves—Working Barrel—
Atlas Ball Co.
Axelson Machine Co.
D & B Pump & Supply Co.
D. & N. Specialty Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor Working Barrel Co.
Norris, W. C.
Northrup Equipment Co.
Oil Well Supply Co.

Wrenches—Closet Spuds—
Nye Tool & Machine Works

Wrenches—Drop Forged—
Williams, J. H., & Co.

Wrenches—Pipe—
Ridge Tool Co.
Trimont Mfg. Co.
Walworth Co.

Wrenches—Ratchet—
Dresser, S. R., Mfg. Co.
Nye Tool & Machine Works.

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.

Walking Beams—Steel—
Emsco Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Water Cooling Systems —
Power Plant Equipment Co.

Water Softeners and Filters—
Butler Mfg. Co.
Graver Corp.

Wax—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.

Weight Indicators—
Hughes Tool Co.

Welding Accessories—Electric—
Wilson Welder & Metals Co.

Welding and Cutting Apparatus—
Oxweld Acetylene Co.

Welding Machines—Electric—
Wilson Welder & Metals Co.

Welding Supplies—
Oxweld Acetylene Co.

Welding Wire—
Frick-Reid Supply Co.
Oxweld Acetylene Co.
Wilson Welder & Metals Co.

Well Shooting—
Eastern Torpedo Co.
Kinley, M. M.
Zero Hour Torpedo Co.

Wheels—Pipe Cutter—
Nye Tool & Machine Works

Winches—
Braden Co.
Brooks Engineering Co.
Oil Conservation Engineering Co.

Wire Lines (See Cables—Steel)—

Wood Patterns and Models—
Gaso Pump & Burner Mfg. Co.

Working Barrels—
Axelson Machine Co.
D & B Pump & Supply Co.
D. & N. Specialty Co.
Franklin Valveless Engine Co.
Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
McGregor Working Barrel Co.
Norris, W. C.
Northrup Equipment Co.
Oil Well Supply Co.

Varnishes—
Arco Company, The
Detroit Graphite Co.
Sherwin-Williams Co.

Vises—Bench—
Nye Tool & Machine Works.

Vises—Pipe—
Nye Tool & Machine Works.

Vises—Post—
Nye Tool & Machine Works.

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.

Walking Beams—Steel—
Emsco Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Water Cooling Systems —
Power Plant Equipment Co.

Water Softeners and Filters—
Butler Mfg. Co.
Graver Corp.

Wax—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.

Weight Indicators—
Hughes Tool Co.

Welding Accessories—Electric—
Wilson Welder & Metals Co.

Welding and Cutting Apparatus—
Oxweld Acetylene Co.

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Wilson Welder & Metals Co.

Welding Supplies—
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Wilson Welder & Metals Co.

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Kinley, M. M.
Zero Hour Torpedo Co.

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Nye Tool & Machine Works

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Braden Co.
Brooks Engineering Co.
Oil Conservation Engineering Co.

Wire Lines (See Cables—Steel)—

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Gaso Pump & Burner Mfg. Co.

Working Barrels—
Axelson Machine Co.
D & B Pump & Supply Co.
D. & N. Specialty Co.
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Sherwin-Williams Co.

Vises—Bench—
Nye Tool & Machine Works.

Vises—Pipe—
Nye Tool & Machine Works.

Vises—Post—
Nye Tool & Machine Works.

W

Wagons—Truss Wheel—
Athey Truss Wheel Co.

Walking Beams—Steel—
Emsco Derrick & Equipment Co.
Moore, Lee C., & Co., Inc.

Water Cooling Systems —
Power Plant Equipment Co.

Water Softeners and Filters—
Butler Mfg. Co.
Graver Corp.

Wax—
Barnsdall Refining Co.
Gulf Refining Co.
Pure Oil Co.

Weight Indicators—
Hughes Tool Co.

Welding Accessories—Electric—
Wilson Welder & Metals Co.

Welding and Cutting Apparatus—
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Braden Co.
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Frick-Reid Supply Co.
Hough, Charles N., Mfg. Co.
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Norris, W. C.
Northrup Equipment Co.
Oil Well Supply Co.

Wrenches—Closet Spuds—
Nye Tool & Machine Works

Wrenches—Drop Forged—
Williams, J. H., & Co.

Wrenches—Pipe—
Ridge Tool Co.
Trimont Mfg. Co.
Walworth Co.

Wrenches—Ratchet—
Dresser, S. R., Mfg. Co.
Nye Tool & Machine Works.

Z

Zinc Oxide—
Eagle-Picher Lead Co.

XUM

Oklahoma-Kansas and Eastern Pipeline Report

PIPELINE STATEMENT FOR JUNE

Oklahoma-Kansas

Runs

*Prairie Pipe Line Co.	3,864,000	128,800
Gulf Pipe Line Co.	1,185,886	39,530
Texas Pipe Line Co.	505,387	16,846
Magnolia Petroleum Co.	1,141,393	38,046
Cosden Pipe Line Co.	821,767	27,392
Empire Pipe Line Co.	724,409	24,147
*Sinclair Pipe Line Co.	1,692,000	56,400
*Other lines	7,080,000	236,000
Total June	17,014,842	567,161
Total May	17,864,437	576,281
Difference	849,595	9,120

Shipments

†Prairie Pipe Line Co.	4,215,416	140,514
Gulf Pipe Line Co.	1,078,313	35,941
The Texas Pipe Line Co.	777,062	25,902
Magnolia Petroleum Co.	1,223,754	40,792
Cosden Pipe Line Co.	798,600	26,620
Empire Pipe Line Co.	828,505	27,616
†Sinclair Pipe Line Co.	2,486,153	82,872
*Other lines	7,950,000	265,000
Total June	19,357,803	645,260
Total May	21,275,280	686,298
Difference	1,917,477	41,038

Stocks

*Prairie Oil & Gas Co.	27,750,000
*Prairie Pipe Line Co.	2,000,000
Gulf Pipe Line Co. and Gypsy Oil Co.	6,398,124
The Texas Company	2,921,048
Magnolia Petroleum Co.	4,533,898
Empire Pipe Line Co.	2,736,142
Cosden Pipe Line Co.	2,055,583
*Sinclair Pipe Line Co.	18,800,000
Carter Oil Co.	12,948,357
*Other lines	9,300,000
Total June	89,443,202
Total May	90,623,771
Difference	1,180,569

*Estimated. †Prairie Pipe Line shipments include also Texas crude oil and Sinclair shipments include also Texas and Wyoming crude oil.

Note:—Stocks do not include approximately 4,800,000 bbls. of crude oil held in storage on private tank farms and leases.

EASTERN PIPE LINES

Runs From Wells

In the following table will be found the regular receipts from wells by various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for April and May:

	April, 1926	May, 1926
Nat. Transit	176,931.37	174,995.11
S. W. Pa. Pipe	89,773.16	91,188.06
Eureka P. L.	372,871.02	370,755.39
Buckeye P. L. (Macksburg)	304,514.55	294,855.09
Buckeye P. L. (Cleveland)	12,060.87	11,845.40
Buckeye P. L. (Lima, etc.)	127,204.85	133,401.39
Indiana P. L.	9,095.76	10,520.15
Cumberland P. L.	273,842.36	268,123.06
N. Y. Transit	20,181.07	19,552.93
Tidewater P. L.	160,027.79	159,613.39
Pure Oil	171,766.80	172,006.54
Emery P. L.	48,703.74	49,842.97
Indian Ref.	93,143.14	97,979.63
Paragon Dev.	24,723.50	23,308.37
Pittsburgh P. L.	6,733.43	
Total	1,890,573.41	1,877,987.48
Daily average	63,019.11	60,580.24

Note: Indian Refining Co. also reported other receipts of 283,329.87 bbls. Paragon Refining Co. had other receipts of 140,751.80 bbls. Paragon Development had other receipts of 2,113.44 bbls. Pure Oil had other receipts of 59,553.74 bbls.

Petroleum Deliveries

The following tables exhibit the shipments or regular deliveries of various pipe lines in New York, Pennsylvania, West Virginia, Ohio, Kentucky and Indiana for April and May:

	April, 1926	May, 1926
Nat. Transit	314,763.21	345,085.14
S. W. Pa. P. L.	409,564.75	393,148.52
Eureka P. L.	163,392.74	192,968.03
Buckeye P. L. (Macksburg)	94,254.91	114,603.45
Buckeye P. L. (Cleveland)	1,162.42	969.91
Buckeye P. L. (Lima, etc.)	823,641.06	910,244.94
Indiana P. L.	963,616.70	996,006.17
Cumberland P. L.	162,112.44	144,932.36
N. Y. Transit	668,407.25	690,213.42
Northern Pipe	133,960.98	161,237.60
Tidewater P. L.	93,020.34	159,830.90
Pure Oil	295,777.75	244,274.44
Emery P. L.	45,829.06	49,935.36
Paragon Ref.	170,282.16	140,751.80
Indian Ref.	288,296.97	419,340.15
Paragon Dev.	26,494.22	27,092.55
Pittsburgh P. L.	6,539.32	
Total	4,571,126.27	4,990,634.73
Daily average	152,370.87	154,536.60

Gross Stocks

The gross stocks held by various pipe lines in the oil producing sections of New York, Pennsylvania, West Virginia, Ohio, Indiana and Kentucky, at the close of April and May, were as follows:

	April, 1926	May, 1926
Nat. Transit	1,069,233.29	1,062,711.06
S. W. Pa. P. L.	688,704.11	592,119.25
Eureka P. L.	1,621,601.25	1,489,308.65
Buckeye P. L. (Macksburg)	417,370.13	454,767.17
Buckeye P. L. (Cleveland)	73,536.91	80,869.73
Buckeye P. L. (Lima, etc.)	2,369,543.33	2,331,309.46
Indiana P. L.	544,568.51	566,868.09
Cumberland P. L.	599,474.86	598,818.89
Southern P. L.	431,210.52	447,896.85
N. Y. Transit	696,608.61	736,622.34
Northern P. L.	436,138.52	442,189.21
Pure Oil	460,634.48	450,527.08
Emery P. L.	24,514.24	35,299.99
Paragon Ref.	72,985.28	45,985.57
Indian Ref.	231,194.41	193,356.41
Paragon Dev.	4,918.23	4,107.65
Pittsburgh P. L.	4,614.59	
Total	9,805,851.27	9,531,757.40
Decrease	*367,553.84	274,093.87

*Increase.

Grades of Oil

The following table shows the amount of the different grades of oil held by the eastern pipe lines at the close of April and May showing the gross stocks of the above fields:

	April, 1926	May, 1926
Pennsylvania	4,076,568.47	3,824,210.70
Lima	947,707.33	953,292.28
Kentucky	1,163,245.60	1,167,315.61
Mid-Continent	3,459,618.16	3,479,821.87
Illinois	158,711.71	107,216.94
Total	9,805,851.27	9,531,757.40

Daily Average Runs

The following table shows the daily average runs of the Pennsylvania, Lima and Kentucky oil fields for the past four years:

	1923	1924	1925	1926
January	76,790	62,638	56,831	55,630
February	71,092	62,023	60,606	60,394
March	76,592	68,721	60,575	61,644
April	76,614	71,058	63,062	63,019
May	77,366	63,942	59,217	60,580
June	77,593	62,230	61,270	.....
July	71,879	64,208	62,639	.....
August	76,910	59,942	59,686	.....
September	72,358	62,930	62,510	.....
October	76,256	64,976	60,995	.....
November	70,762	56,282	59,350	.....
December	69,271	55,814	57,974	.....

Daily Average Shipments

The following table gives daily average shipments from the Pennsylvania, Lima and other fields for the past four years:

	1923	1924	1925	1926
January	171,067	145,518	157,589	156,056
February	164,219	148,732	160,863	159,488
March	185,487	147,098	154,591	160,239
April	170,761	147,611	151,429	152,371
May	177,102	134,997	146,995	154,537
June	173,598	143,010	149,467	.....
July	168,330	124,187	161,338	.....
August	142,776	123,120	161,730	.....
September	137,266	127,825	156,719	.....
October	134,597	123,170	145,388	.....
November	131,426	124,400	142,582	.....
December	139,909	151,892	150,162	.....

Gross Stocks

In the following table will be found the gross stocks of the various lines of the Pennsylvania, Lima and Kentucky oil fields, including oil received from other lines, at the close of each month for the past three years:

	1924	1925	1926
January	12,907,202	11,353,276	9,859,176
February	11,844,068	11,192,924	9,579,354
March	10,906,752	11,158,297	9,438,292
April	10,922,742	11,062,082	9,805,851
May	11,335,309	11,207,562	9,531,757
June	11,544,204	11,093,796	.....
July	12,062,361	11,067,463	.....
August	12,221,676	10,974,481	.....
September	12,206,836	10,781,763	.....
October	12,664,061	11,086,850	.....
November	12,268,530	11,068,158	.....
December	11,583,680	10,458,445	.....

Franklin Pipe Line Co.

The following table exhibits the condition of the Franklin Pipe Line at the close of business for the months named and not counted in the stocks and averages reported above:

	Receipts	Shipmts.	Stocks
1925—			
May	2,814.99	5,719.90	10,254.13
June	3,052.75	1,221.83	12,085.05
July	2,639.34	3,174.10	11,550.29
August	3,216.97	1,577.99	13,189.27
September	2,929.99	5,352.05	10,767.21
October	2,869.75	1,499.34	12,137.63
November	2,759.66	2,671.32	12,283.49
December	2,661.87	3,441.67	11,503.69
1926—			
January	2,990.16	1,478.35	13,015.41
February	2,580.23	2,776.19	12,819.45
March	2,754.62	1,732.77	13,841.30
April	3,137.40	4,519.68	12,459.02
May	2,933.29	2,096.35	13,296.96

The Illinois Field

The following table gives the report of the Illinois Pipe Line Co. in Illinois:

Gross stocks June 1	2,839,930.90
Runs from wells	654,235.77
Other receipts	344,229.50
Regular deliveries	456,231.11
Other deliveries	418,247.69

The amount of Illinois oil run by the Tidewater Pipe Co. in May was 28,180.99 bbls. and deliveries were 43,225.78 bbls. Adding these figures to those of the Illinois Pipe Line Co. makes the runs and deliveries as follows:

1925—	
May	692,671.94
June	700,090.46
July	724,481.26
August	673,652.38
September	706,434.87
October	706,532.00
November	664,556.30
December	665,086.99
1926—	
January	665,243.62
February	632,611.99
March	753,300.74
April	610,967.04
May	682,416.67

1925—	
May	568,573.61
June	589,535.24
July	564,713.19
August	650,649.97
September	510,697.61
October	633,682.53
November	488,449.19
December	578,938.47
1926—	
January	516,083.76
February	506,310.61
March	624,625.98
April	487,604.09
May	498,456.96

The Tidewater Pipe Co., Ltd., also delivered in May 314,131.72 bbls. of Oklahoma oil.

AVERAGE DAILY RECEIPTS OF CALIFORNIA OIL AT ATLANTIC AND GULF PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	New Orleans Galveston	Port Arthur Baton Rouge	Sabine Pass	Tampa	Total	Total All Ports
March	7,000	2,516	48,839	16,612	16,903	91,870	.....	.....	.....	.....	.....	91,870
April	19,033	5,133	28,333	13,400	22,867	88,767	.....	.....	4,700	.....	.....	93,467
May	27,065	7,903	15,387	13,452	17,742	81,549	.....	.....	4,032	.....	.....	85,571
June	24,533	11,600	22,800	34,467	15,167	107,967	.....	.....	.....	.....	.....	107,967

AVERAGE DAILY IMPORTS OF PETROLEUM AT PRINCIPAL UNITED STATES PORTS

Average bbls. per day—	ATLANTIC PORTS						GULF COAST PORTS					
	Baltimore	Boston	New York	Philadelphia	Others	Total	New Orleans Galveston	Port Arthur Baton Rouge	Sabine Pass	Tampa	Total	Total All Ports
March	28,387	15,935	81,742	16,290	34,258	176,612	19,355	44,097	7,096	5,294	75,842	252,454
April	15,200	14,000	76,833	10,633	39,333	156,000	19,200	24,900	2,000	4,433	50,533	206,533
May	12,387	12,258	75,516	11,645	21,548	133,355	12,710	45,226	1,936	5,677	65,549	198,904
June	15,800	10,800	87,300	6,500	21,267	141,667	25,300	42,267	6,567	3,900	78,033	219,700

GROSS PRODUCTION OF THE UNITED STATES FOR 12 MONTHS

(IN BARRELS)

		California	Oklahoma	Texas	Kansas	Arkansas	Louisiana	Rocky Mountains	Eastern Fields	Total
July:	Month	20,411,059	14,263,565	12,337,598	3,686,675	7,835,819	1,898,178	3,129,199	3,348,000	66,910,083
	Daily average	658,421	460,115	397,894	118,925	252,768	61,231	100,942	108,000	2,158,390
August:	Month	21,055,580	14,441,040	11,936,079	3,558,087	7,450,580	1,858,543	3,250,448	3,177,000	66,677,357
	Daily average	677,599	465,480	385,022	114,777	240,341	56,727	104,853	102,484	2,150,883
September:	Month	20,062,763	14,825,040	11,264,890	3,393,270	6,457,950	1,776,570	3,235,625	3,212,000	64,228,108
	Daily average	668,759	494,168	375,496	113,109	215,265	56,219	107,854	107,067	2,140,937
October:	Month	20,015,076	14,921,199	11,196,511	3,477,146	6,409,281	1,871,830	3,394,990	3,248,000	64,534,033
	Daily average	645,648	481,329	361,178	112,166	206,751	60,382	109,500	104,774	2,081,743
November:	Month	19,095,907	14,590,980	10,650,987	3,221,760	5,927,955	1,758,882	3,088,121	2,992,000	61,325,692
	Daily average	636,530	486,366	355,003	107,397	197,599	58,629	102,937	99,753	2,044,190
December:	Month	19,249,711	14,123,848	10,930,455	3,308,816	6,047,883	1,763,966	3,187,164	3,086,900	61,698,743
	Daily average	620,959	455,608	352,595	106,736	195,093	56,902	102,812	99,552	1,990,282
January:	Month	19,069,563	13,674,813	11,049,715	3,250,536	5,489,604	1,726,390	3,136,280	3,014,000	60,410,901
	Daily average	615,147	441,123	356,442	104,856	177,084	55,690	104,396	97,226	1,948,741
February:	Month	17,163,963	12,392,016	9,943,232	2,877,812	4,756,836	1,584,184	2,778,605	2,931,000	54,427,648
	Daily average	612,999	442,572	355,115	102,779	169,887	56,578	99,236	104,678	1,978,844
March:	Month	18,825,786	14,312,886	11,014,238	3,334,887	5,115,837	1,889,663	3,161,250	3,349,000	61,003,547
	Daily average	608,283	461,706	355,298	107,577	165,027	60,957	101,976	108,032	1,957,856
April:	Month	18,091,771	14,468,190	10,799,760	3,330,120	5,127,510	1,959,570	3,231,404	3,183,000	60,191,325
	Daily average	603,059	482,273	359,992	111,004	170,917	65,319	104,239	106,100	2,006,377
May:	Month	18,667,144	14,507,008	11,940,797	3,516,640	5,482,939	2,231,938	3,459,489	3,317,000	63,122,955
	Daily average	602,166	467,968	385,187	113,440	176,879	71,998	111,596	107,000	2,036,224
June:	Month	18,269,417	14,073,510	11,783,550	3,366,450	5,064,760	2,205,480	3,437,905	3,240,000	61,441,072
	Daily average	608,981	469,117	392,785	112,215	168,822	73,516	114,597	108,000	2,048,036
	Total 12 months	229,927,730	170,594,095	134,846,912	40,322,199	71,166,954	22,525,194	38,490,480	38,097,900	745,971,464
	Daily average	629,939	467,381	369,438	110,472	194,978	61,712	105,478	104,378	2,043,757

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219,700

Total
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XUM

XUM

SMOOTHNESS

SMOOTHNESS is a quality to look for in pump operation, not merely because it soothes the nerves [which is important enough] but mainly because smoothness is an external sign of internal efficiency. Smoothness means absence of friction. It indicates parts in correct relation to one another. It spells long life.

The next time you see a GASO pump in operation, note particularly the small amount of vibration compared to pumps of similar design. It is another reason why so many users who try GASOS once standardize on them for all time.

GASO PUMP & BURNER MFG. CO.
Tulsa, Oklahoma

STEAM PUMPS WITH LONG LIFE INBUILT

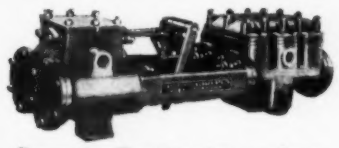


Figure 401—For 175 to 800 pound pressures; a widely used model with an inclination to do the same work as much more expensive types.

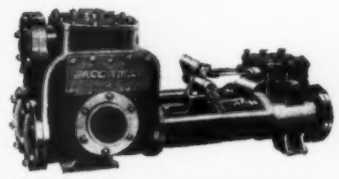


Figure 401-S—An adaptation of Figure 401. Especially suited to refinery uses or wherever else a large capacity, low pressure pump is required.

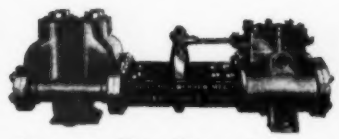


Figure 404—Valve Pot type for 500 to 800 pound pressures. Valve pots accessible from outside. Ideal for high pressure gasoline and acid work.

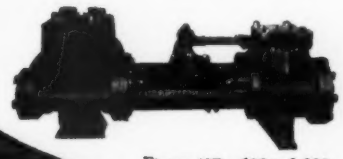
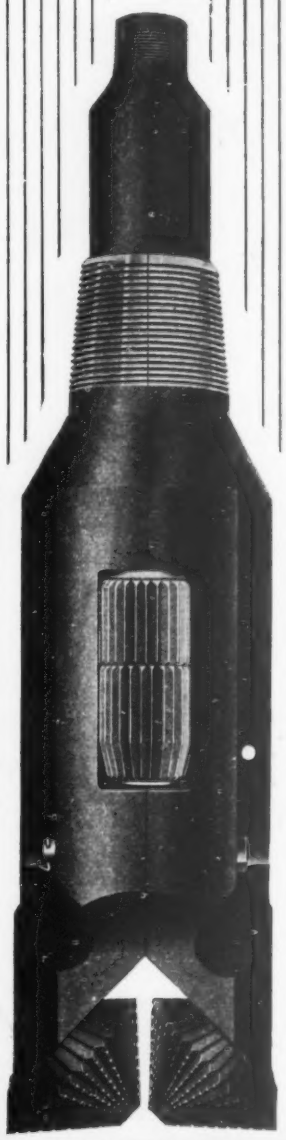


Figure 407—600 to 1,000 pound pressures. A sturdy, large capacity, high pressure steam pump, meeting a large variety of demands. Valve pot type.

GASO PUMPS
for every oil industry need

At least two 11-inch HUGHES ROCK BITS



were in use on every one of the 96 ROTARY RIGS recently running in and around WEWOKA (OKLA) FIELD

HUGHES ROCK BITS are stocked at your supply store

HUGHES TOOL COMPANY

Branch Plants
LOS ANGELES, CALIF.
OKLAHOMA CITY, OKLA.

MAIN OFFICE AND PLANT
HOUSTON TEXAS

Export Office
NEW YORK CITY, N.Y.